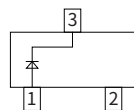
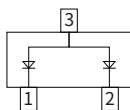


Features

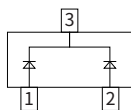
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C



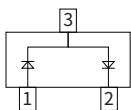
BAT54WT



BAT54AWT



BAT54CWT



BAT54SWT

Mechanical Data

- Case: SOT-323
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

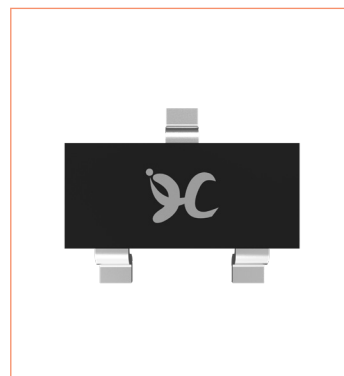
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	30
Maximum RMS voltage	V_{RMS}	V	21
Maximum DC blocking voltage	V_{DC}	V	30
Maximum average forward rectified current	$I_{F(AV)}$	mA	200
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	mA	600
Power Dissipation	P_D	mW	200
Junction Temperature	T_j	°C	125
Storage temperature range	T_{STG}	°C	-55 ~+150
Typical thermal resistance	$R_{\theta JA}$	°C /W	500

Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Typ	Max
Maximum forward voltage	$I_F = 0.1mA$	V_F	mV	—	—	240
	$I_F = 1.0mA$			—	—	320
	$I_F = 10mA$			—	—	400
	$I_F = 30mA$			—	—	500
	$I_F = 100mA$			—	—	1000
Maximum reverse current	$V_R = 25V$	I_R	μA	—	—	2.0
Capacitance between terminals	$V_R = 1.0V, f = 1MHz$	C_T	pF	—	—	10.0
Reverse Recovery time	$I_F = I_R = 10mA$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}	ns	—	—	5.0

SOT-323



► **Ratings And Characteristics Curves** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

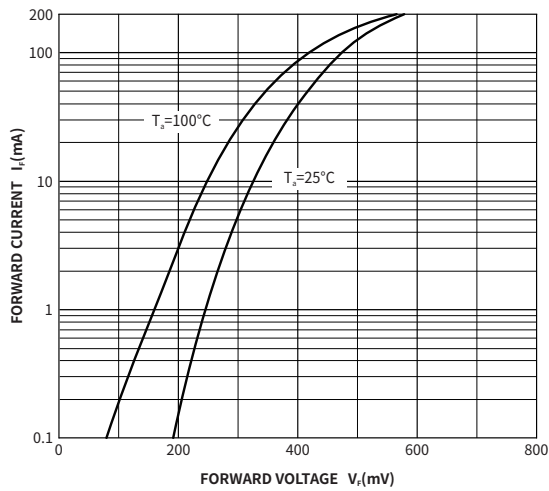


Fig.1 Typical Instantaneous Forward Characteristics

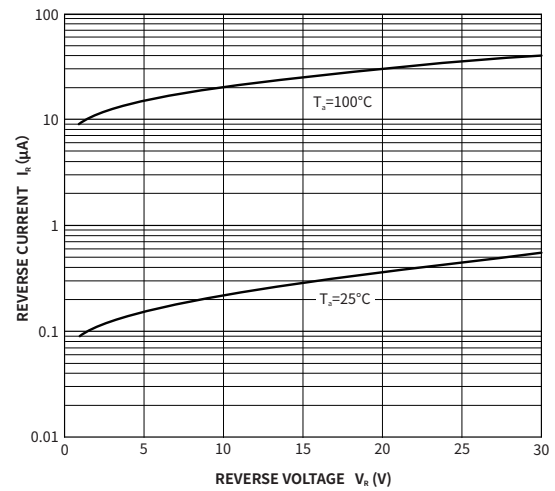


Fig.2 Typical Reverse Characteristics

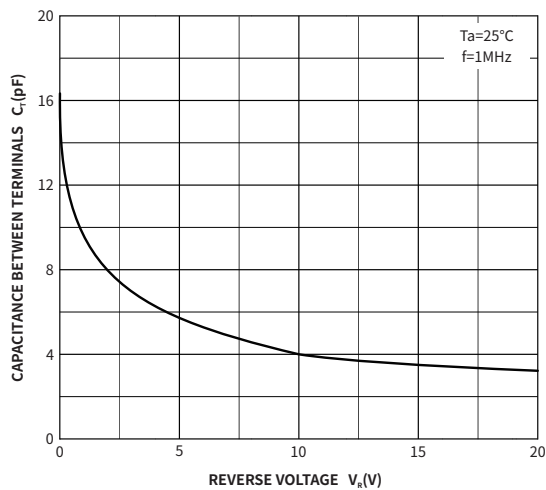


Fig.3 Typical Junction Capacitance

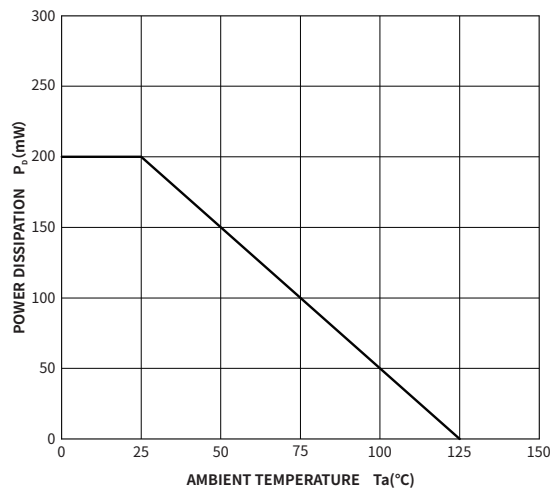


Fig.4 Power Derating Curve

Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-323	R1	0.005	3000	30000	120000	7"

Package Outline Dimensions (SOT-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.043
A1	-	0.10	-	0.004
A2	0.90	1.00	0.035	0.039
b	0.15	0.40	0.012	0.020
c	0.10	0.25	0.004	0.010
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
E1	2.15	2.45	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.26	0.46	0.010	0.018
θ	-	8°	-	8°

Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.70	-	0.027	-
K	-	0.90	-	0.035
M	1.90	-	0.074	-
N	-	1.30	-	0.051