Schottky Barrier Diode

Parameter	Value	Unit
V_{RRM}	30	V
I_F	200	mA



SOT-323

Features

- Low Forward Voltage Drop
- Extremely Fast Switching Speed

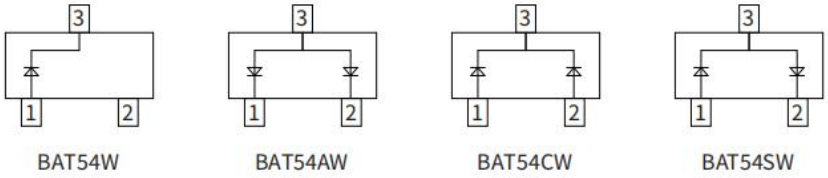
Applications

- High-Frequency Inverters
- Free Wheeling
- Polarity Protection

Marking Information

Marking:

BAT54W: KL5
BAT54AW: KL6
BAT54CW: KL7
BAT54SW: KL8



Absolute Maximum Ratings(Ta=25℃unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RMS}	30	V
DC blocking voltage	V_R	30	V
Forward Continuous Current	I_F	200	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	600	mA
Repetitive Peak Forward Current @ t≤1s,δ≤0.5	I_{FRM}	300	mA
Power Dissipation	P_D	200	mW
Typical thermal resistance	$R_{\theta JA}$	500	℃ /W
Junction Temperature	T_J	125	℃
Storage temperature range	T_{STG}	-55 ~+150	℃

Electrical Characteristics(Ta=25℃unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=100μA	30			V
Maximum reverse current	I_R	V_R=25V			2.0	μA
Forward voltage	V_F	I_F=0.1mA			240	mV
		I_F=1.0mA			320	
		I_F=10mA			400	
		I_F=30mA			500	
		I_F=100mA			1000	
Diode capacitance	C_D	V_R=0V, f=1MHz			10	pF
Reverse Recovery time	t_{rr}	I_F=I_R=10mA I_{rr}=0.1×I_R, R_L=100Ω			5.0	ns

Typical Characteristics

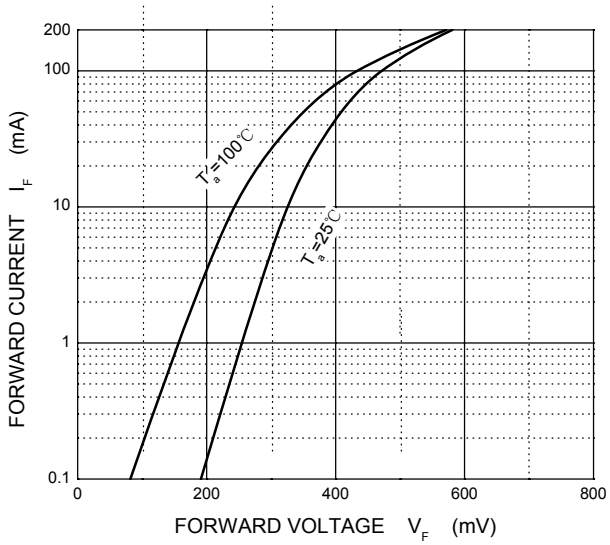


Fig.1 Typical Instantaneous Forward Characteristics

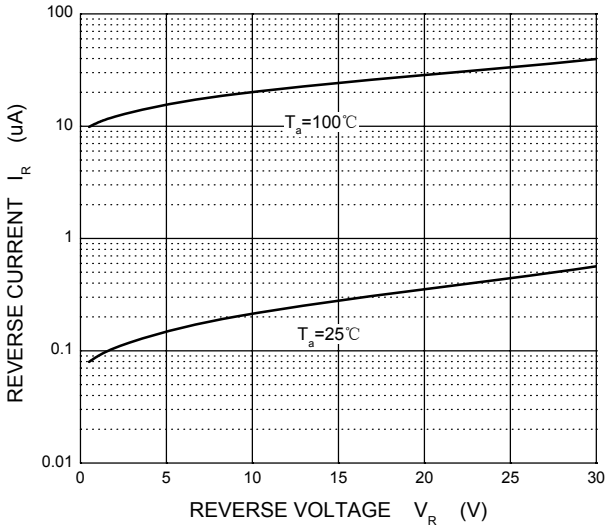


Fig.2 Typical Reverse Characteristics

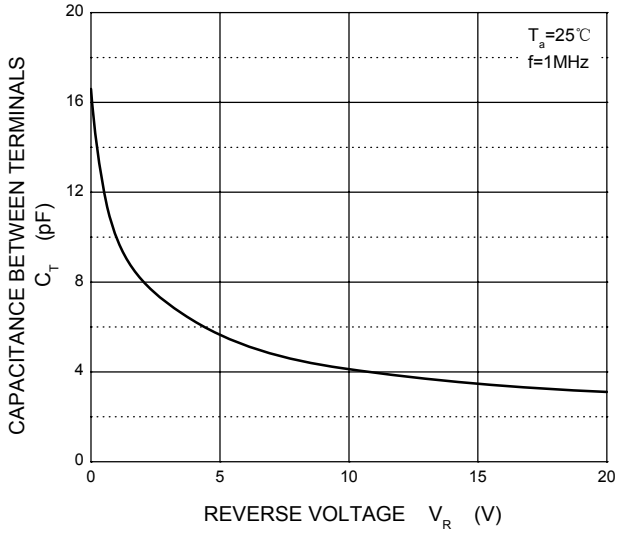


Fig.3 Typical Junction Capacitance

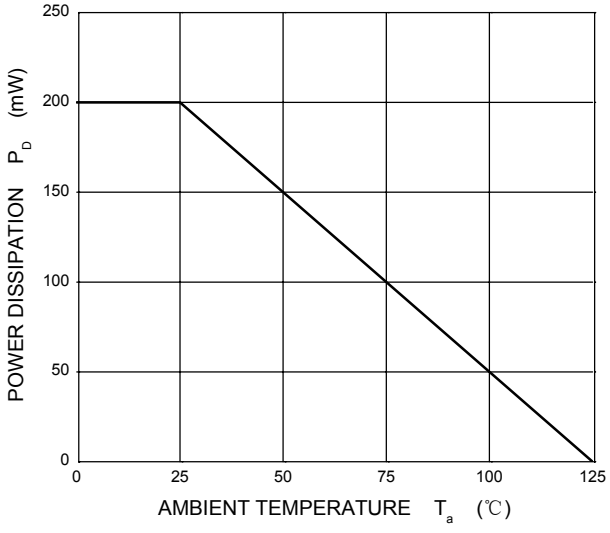
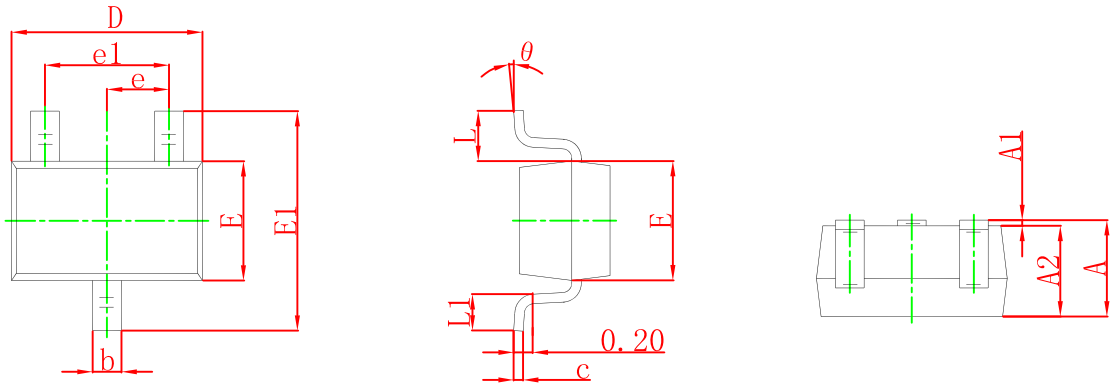


Fig.4 Power Derating Curve

Package Outlines (Units: mm)
SOT-323



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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