

BAT54/A/C/SW

Schottky Barrier Diode

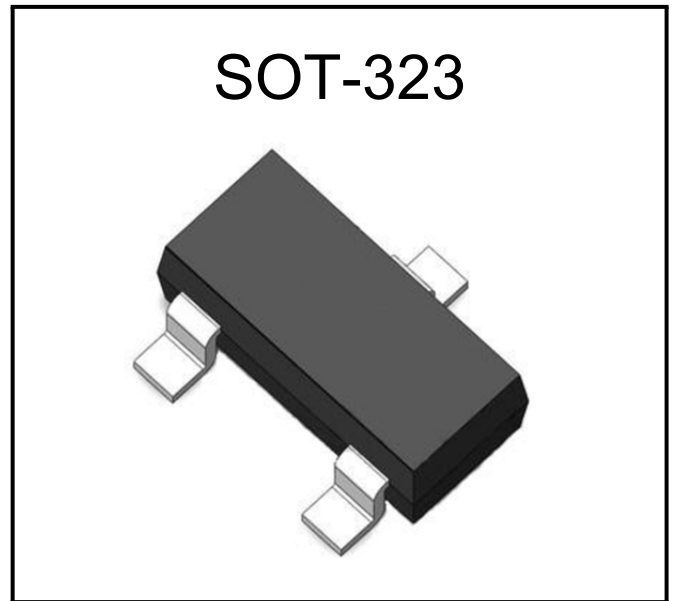
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

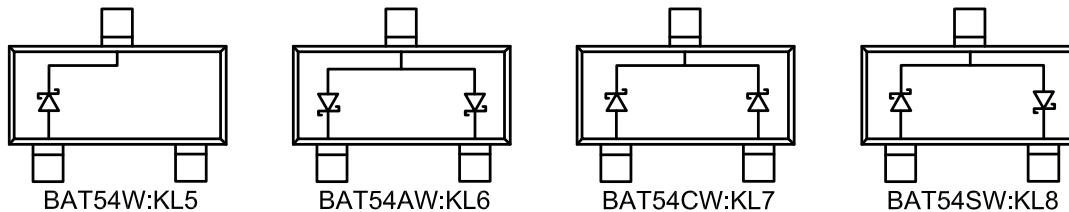
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOT-323 PlasticPackage

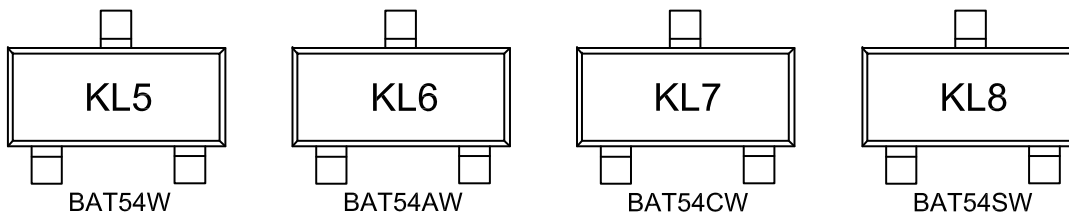
Package



Circuit



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT54W	SOT-323	KL5	3K	Tape and reel
BAT54AW	SOT-323	KL6	3K	Tape and reel
BAT54CW	SOT-323	KL7	3K	Tape and reel
BAT54SW	SOT-323	KL8	3K	Tape and reel



BAT54/A/C/SW

Schottky Barrier Diode

Maximum Ratings@ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameters	Value	Unit
V_{RRM}	Repetitive Peak Reverse voltage	30	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$I_{F(AV)}$	Maximum average forward rectified current	200	mA
I_{FSM}	Non-repetitive peak forward surge current 8.3ms singlehalf sine-wave	600	mA
P_d	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	$^{\circ}\text{C/W}$
T_j	Operating junction temperature range	-40 to +125	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics@ $T_A=25^{\circ}\text{C}$ unless otherwisenoted

Symbol	Parameters	Test conditions	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R=100\mu\text{A}$	30	—	—	V
V_F	Forward voltage	$I_F=0.1\text{mA}$	—	—	0.24	V
		$I_F=1\text{mA}$	—	—	0.32	
		$I_F=10\text{mA}$	—	—	0.40	
		$I_F=30\text{mA}$	—	—	0.50	
		$I_F=100\text{mA}$	—	—	1.00	
I_R	Reverse current	$V_R=25\text{V}$	—	—	2	μA
C_D	Diode Capacitance	$V_R=1\text{V}, f=1\text{MHz}$	—	—	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R, R_L=100\Omega$	—	—	5	nS



BAT54/A/C/SW

Schottky Barrier Diode

Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Forward Characteristics

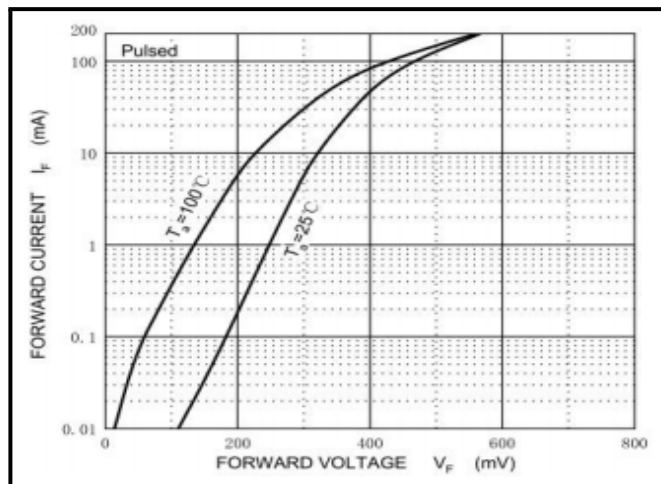


Figure 2: Reverse Characteristics

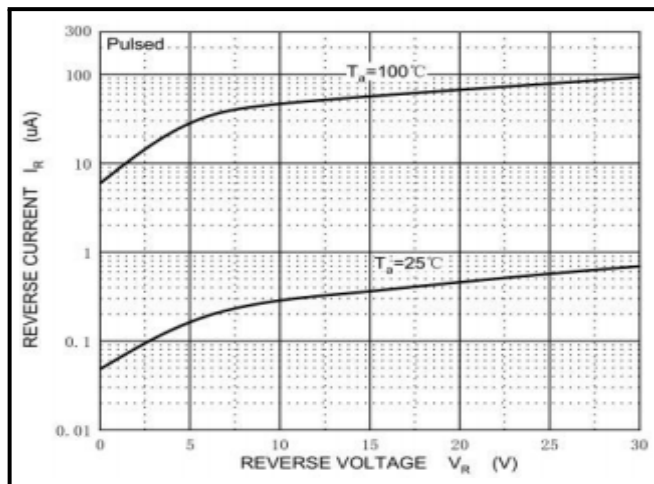


Figure 3: Capacitance Characteristics

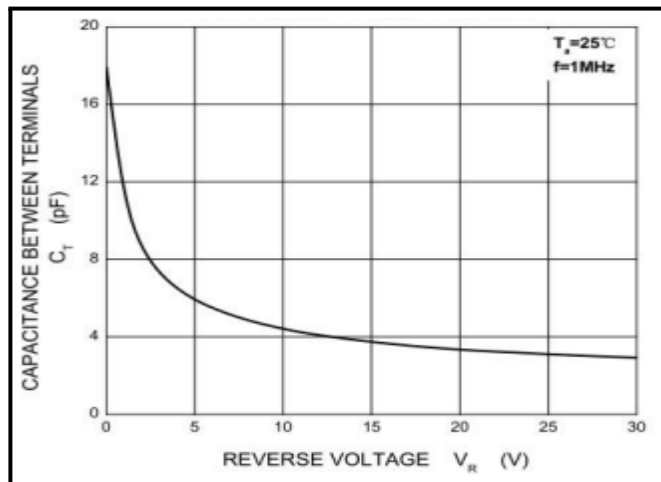
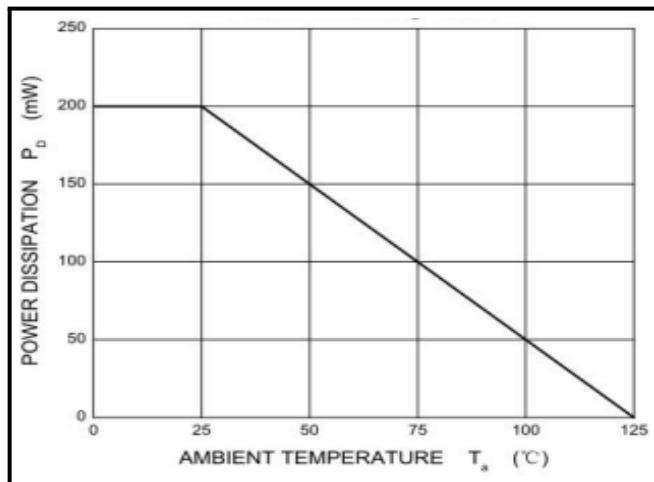


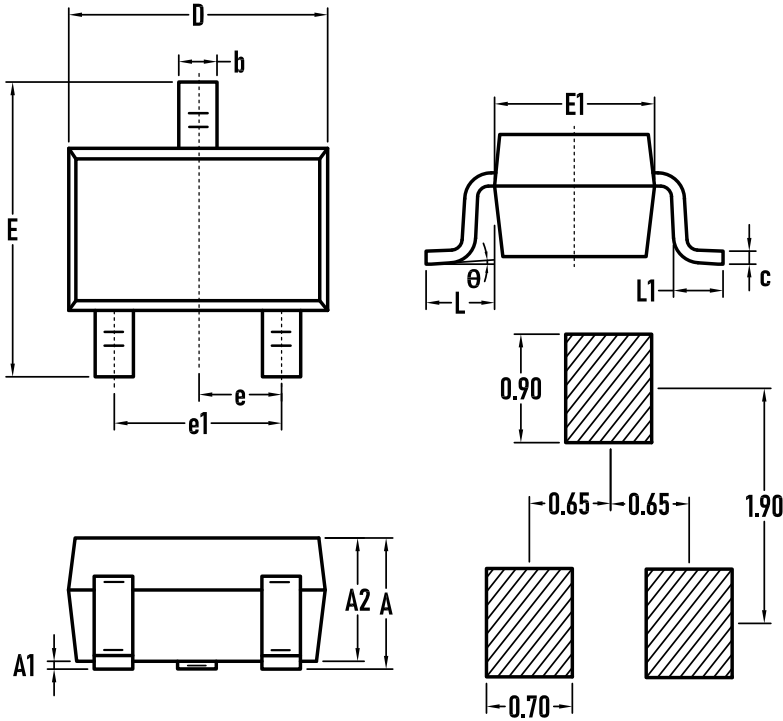
Figure 4: Power Derating Curve



BAT54/A/C/SW

Schottky Barrier Diode

Outline Drawing - SOT-323



SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.00	0.05	0.10
A2	0.90	0.95	1.00
b	0.20	0.30	0.40
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e	0.650Typ.		
e1	1.20	1.30	1.40
L1	0.26	0.36	0.46
L	0.525REF		
θ	0°	4°	8°

