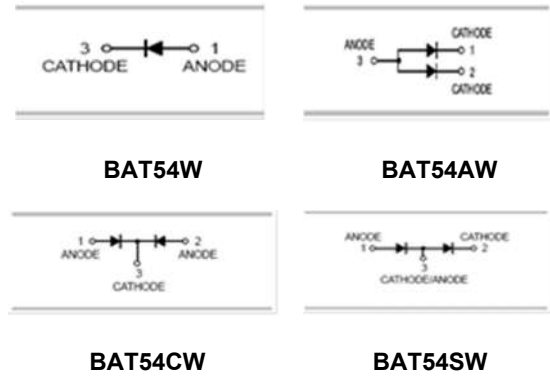


- Low forward voltage drop.
- Fast switching.
- Ultra-small surface mount package.
- PN junction guard ring for transient And ESD protection.

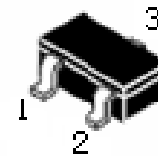
Typical Applications

- For general purpose switching applications.



Mechanical Data

- Case: SOT-323
- Terminals: solderable per MIL-STD-202, Method 208.



SOT-323

Ordering Information

Part Number	Package	Shipping	Marking Code
BAT54W□	SOT-323	3000/Tape&Reel	KL5
BAT54AW□	SOT-323	3000/Tape&Reel	KL6
BAT54CW□	SOT-323	3000/Tape&Reel	KL7
BAT54SW□	SOT-323	3000/Tape&Reel	KL8

□: none is for Lead Free package;
 “G” is for Halogen Free package.

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

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak reverse voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Reverse Voltage	V_R		
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward surge current@ $t_p<1s$	I_{FSM}	600	mA
Power Dissipation *	P_d	230	mW

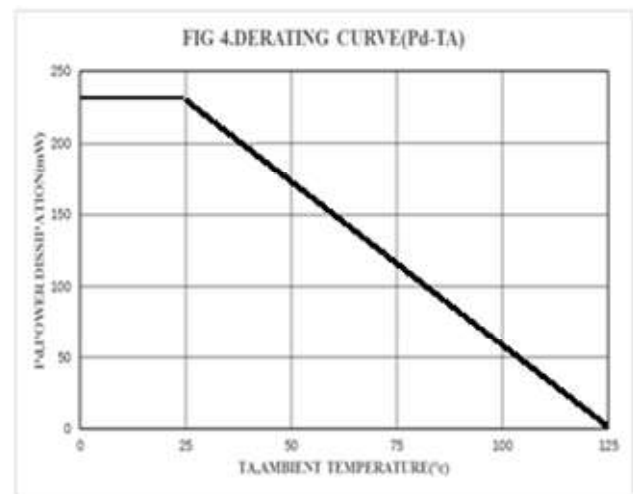
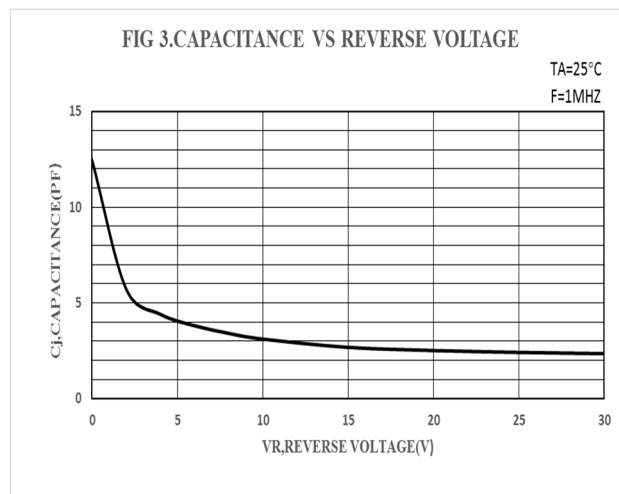
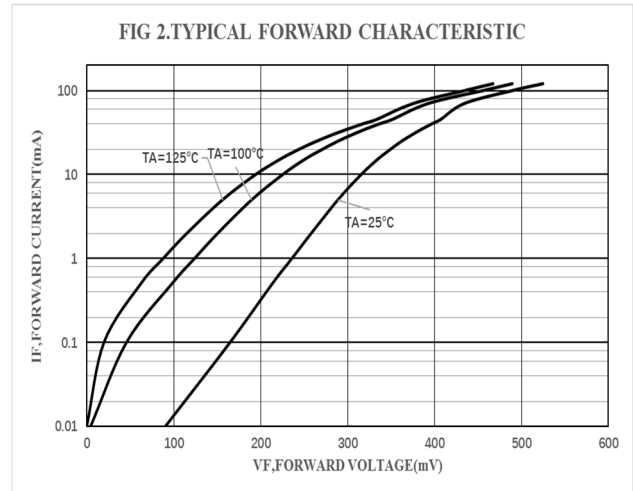
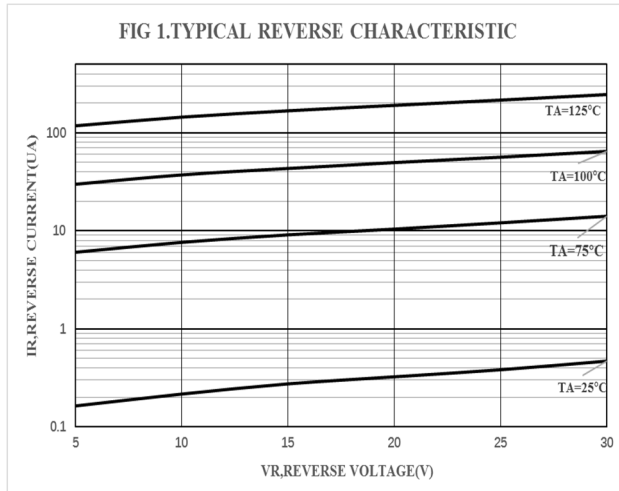
* part mounted on FR-4 board with recommended pad layout

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal resistance junction to ambient air	$R_{\theta JA}$	450	$^{\circ}C/W$
Junction temperature	T_j	125	$^{\circ}C$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}C$

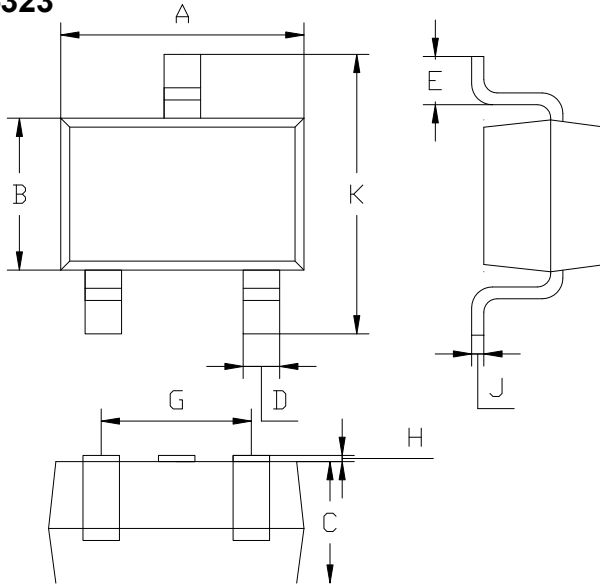
Electrical Characteristics (@ $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu A$	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}	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$			5	ns
*1: pulse test, $t_p \leq 300\mu s$ *2: pulse test, $t_p \leq 5ms$						

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


Package Outline Dimensions(unit:mm)

SOT-323



SOT-323		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.90	1.10
D	0.15	0.35
E	0.25	0.40
G	1.20	1.40
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

Mounting Pad

Layout(unit:mm) SOT-323

