

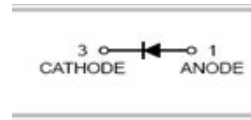
Features

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

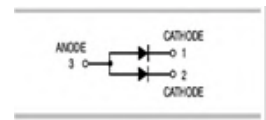
HF

Mechanical Data

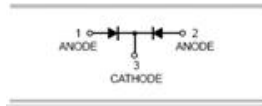
- Case: SOT-523
- Terminals: solderable per MIL-STD-202, Method 208.



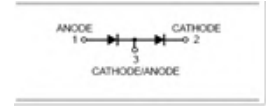
BAT54T



BAT54AT



BAT54CT



BAT54ST



SOT-523

Ordering Information

Part Number	Package	Shipping	Marking Code
BAT54T	SOT-523	3000pcs / Tape & Reel	L1
BAT54AT	SOT-523	3000pcs / Tape & Reel	L2
BAT54CT	SOT-523	3000pcs / Tape & Reel	L3
BAT54ST	SOT-523	3000pcs / Tape & Reel	L4

Maximum Ratings (@T_A=25°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@tp<1s	I _{FSM}	600	mA
Power Dissipation *	P _D	150	mW

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

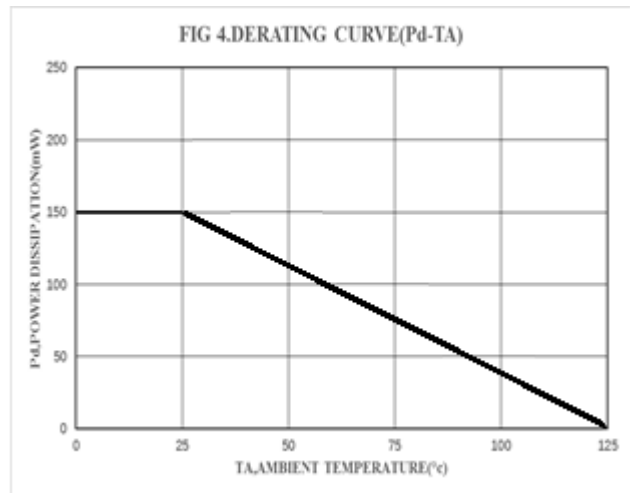
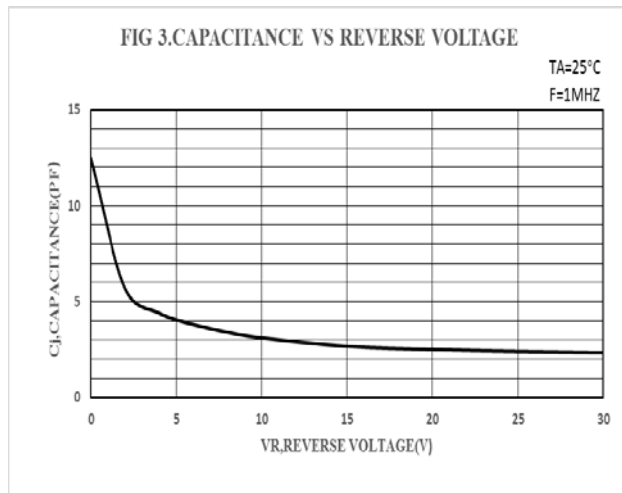
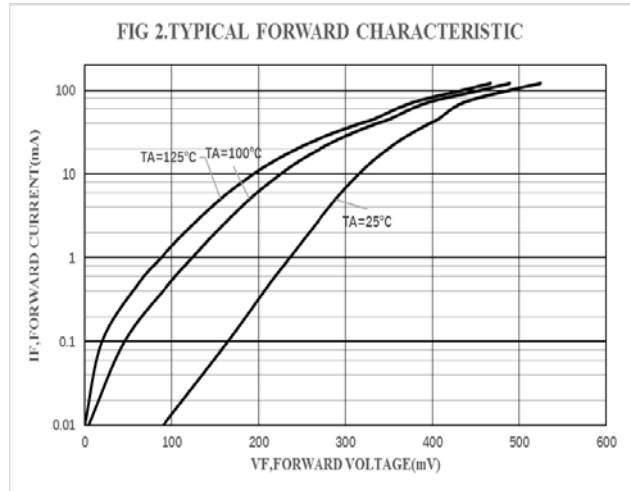
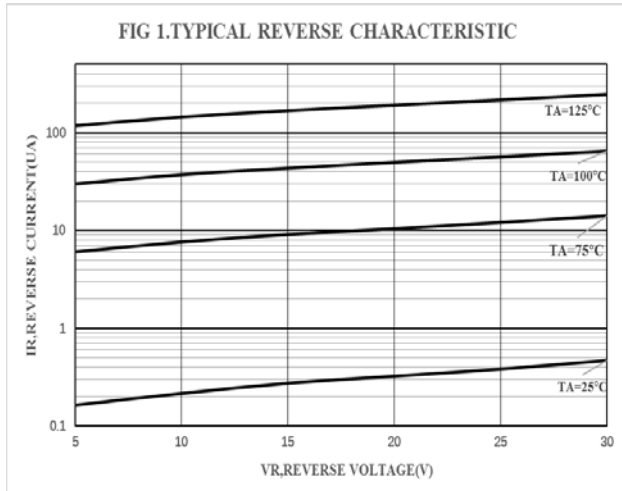
Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal resistance junction to ambient air	$R_{\theta JA}$	667	$^{\circ}C/W$
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)

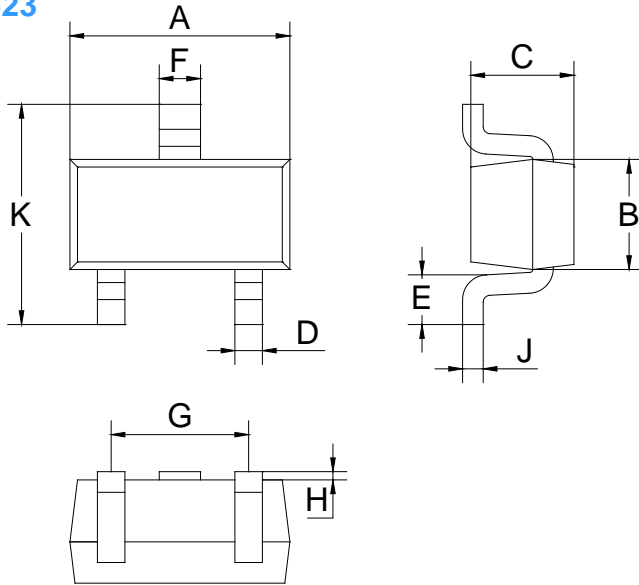
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu A$	30			V
Forward voltage *1	V_F	$I_F=0.1mA$			0.24	V
		$I_F=1mA$			0.32	V
		$I_F=10mA$			0.40	V
		$I_F=30mA$			0.50	V
		$I_F=100mA$			1.00	V
Reverse current *2	I_R	$V_R=25V$			2	μA
Capacitance Between Terminals	C_T	$V_R=1V, f=1MHz$			10	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA$ $I_{rr}=0.1I_R, R_L=100\Omega$			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)

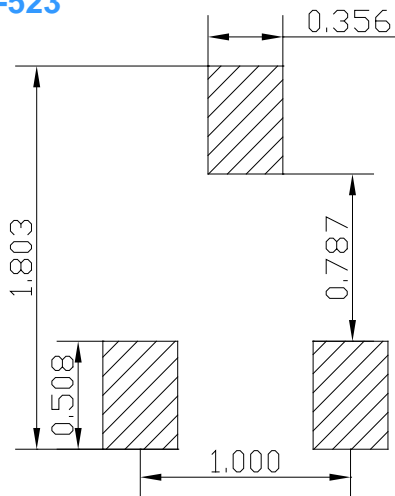
SOT-523



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (unit: mm)

SOT-523



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