



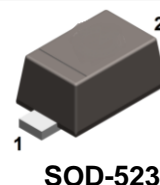
Features

- Fast switching
- Low forward voltage



Mechanical Data

- Case: SOD-523
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BAT54X	SOD-523	3000 pcs / Tape & Reel	JV

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}		
Working Peak Reverse Voltage	V _{RWM}	30	V
DC Reverse Voltage	V _R		
Maximum Average Forward Output Current	I _{F(AV)}	200	mA
Forward Surge Current @ t _p < 1s	I _{FSM}	600	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *2	P _D	150	mW
Thermal Resistance (Junction-to-Ambient) *1	R _{θJA}	269	°C/W
Thermal Resistance (Junction-to-Case) *1	R _{θJC}	182	°C/W
Thermal Resistance (Junction-to-Lead) *1	R _{θJL}	194	°C/W
Operating junction Temperature	T _J	-55 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C



Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

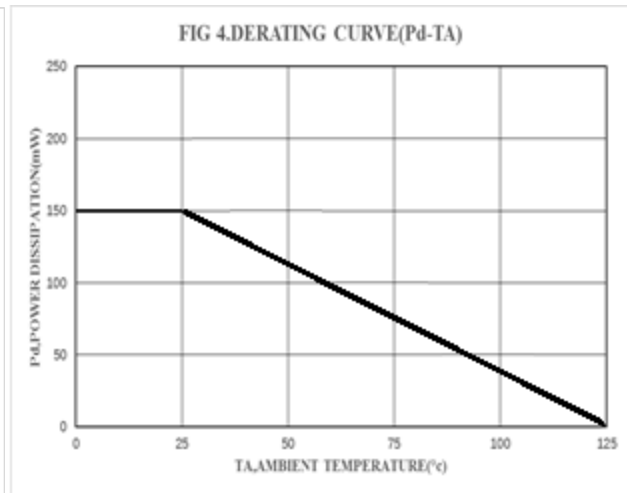
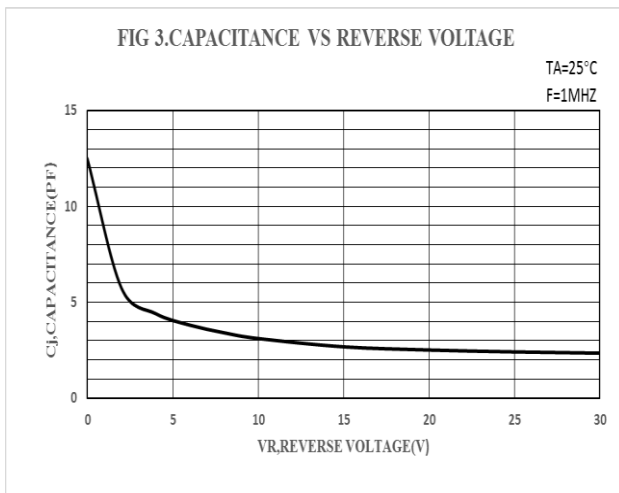
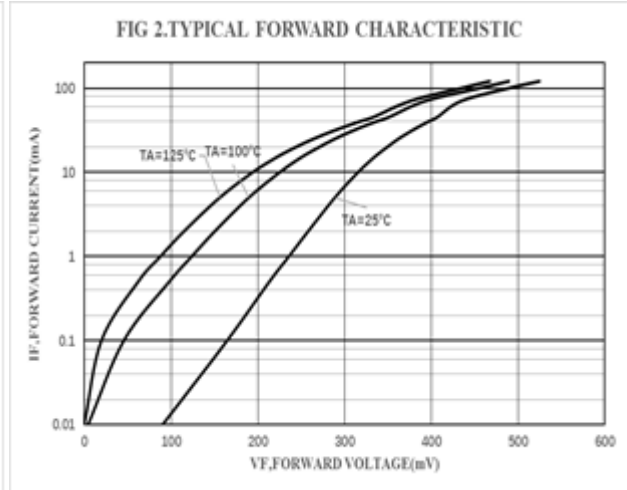
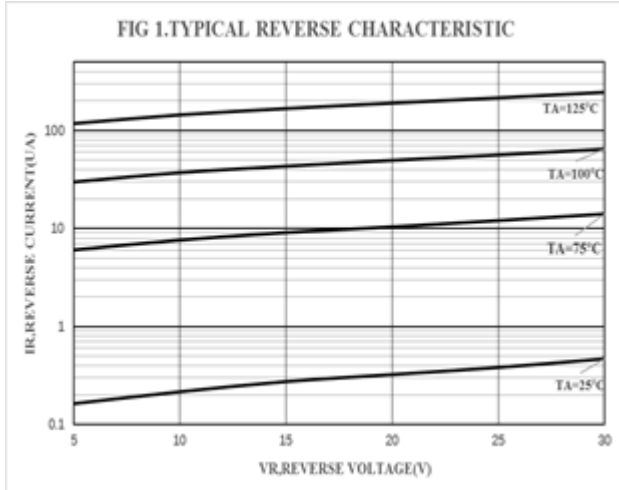
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V _(BR)	I _R = 100μA	30	-	-	V
Forward Voltage *3	V _F	I _F = 0.1mA	-	-	0.24	V
		I _F = 1mA	-	-	0.32	V
		I _F = 10mA	-	-	0.40	V
		I _F = 30mA	-	-	0.50	V
		I _F = 100mA	-	-	0.80	V
Maximum Peak Reverse Current *4	I _R	V _R = 25V	-	-	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*I _R , R _L = 100Ω	-	-	5	ns

Notes:

1. The data tested by surface mounted on a 25.4mm * 25.4mm * 1mm FR4-epoxy P.C.B
2. The data tested by surface mounted on FR-4 board with recommended pad layout
3. Pulse test, tp≤300μs
4. Pulse test, tp≤5ms

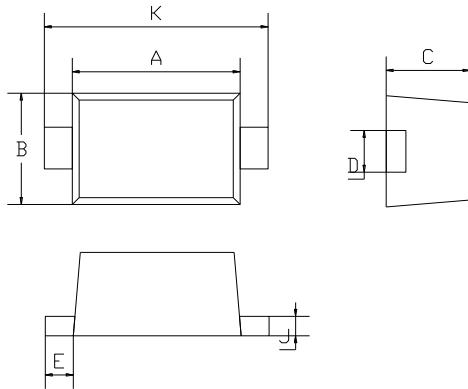


Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)





Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523

