

Features

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited For Automatic Insertion



SOD-523 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_R	Peak Repetitive Peak Reverse Voltage	30	V
V_{RRM}	Working Peak Reverse Voltage		
V_{RWM}	DC Blocking Voltage		
I_{FM}	Forward Continuous Current	200	mA
$V_{R(RMS)}$	RMS Reverse Voltage	21	V
I_{FM}	Forward Continuous Current	200	mA
I_{FRM}	Repetitive Peak Forward Current @ $t<1.0\text{s}$	500	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	4	A
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	677	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	-40 ~ +125	$^{\circ}\text{C}$
T_{STG}	Operating and Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

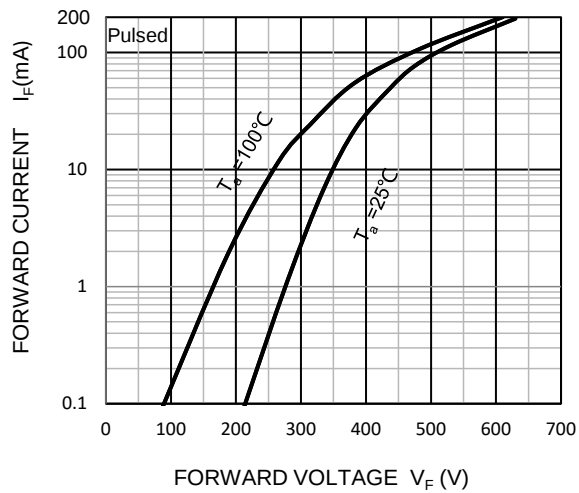
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=10\mu\text{A}$	30	--	--	V
I_R	Reverse current	$V_R=25\text{V}$	--	--	0.5	μA
V_F	Forward voltage	$I_F=2\text{mA}$	0.26	--	0.33	mV
		$I_F=15\text{mA}$	--	--	0.45	mV
		$I_F=200\text{mA}$	--	--	1	mV
C_T	Capacitance between terminals	$V_R=1.0\text{V}, f=1.0\text{MHz}$	--	--	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$	--	--	5	ns

Ordering Information (Example)

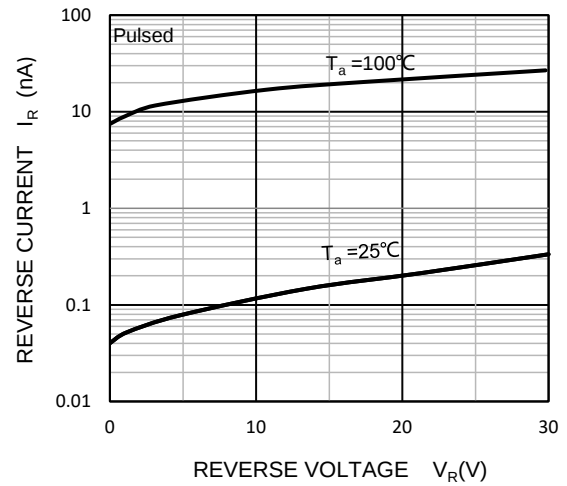
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT43X	SOD-523	S8	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

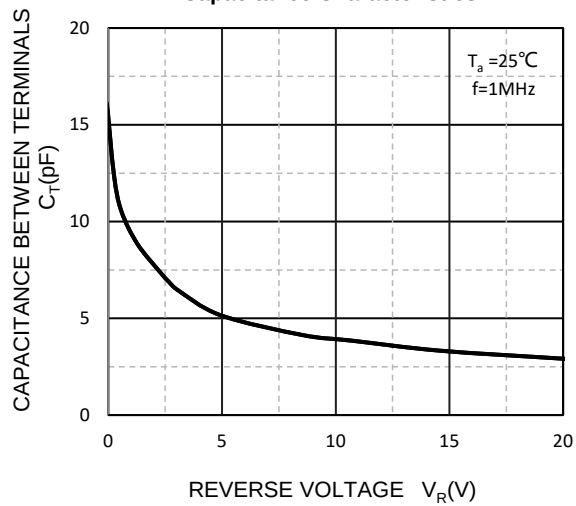
Forward Characteristics



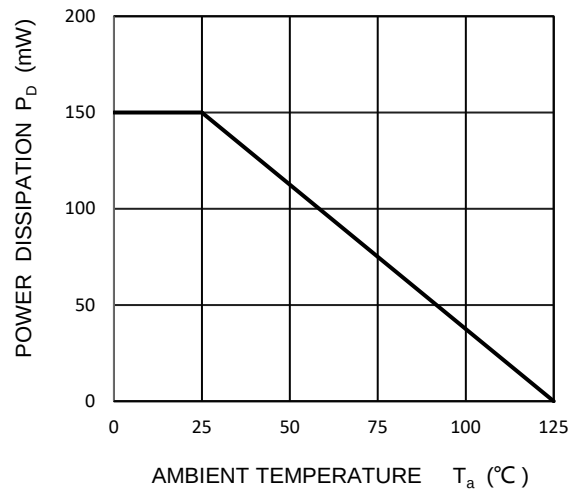
Reverse Characteristics



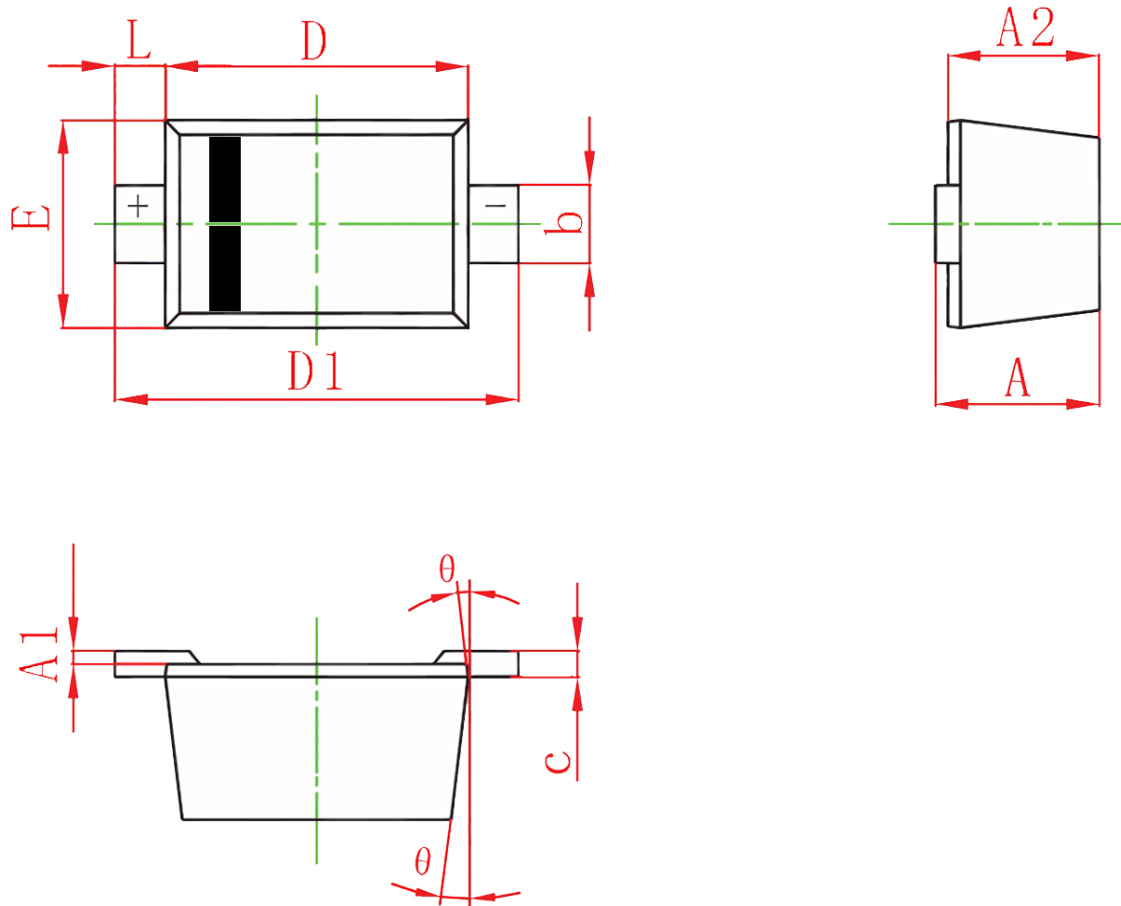
Capacitance Characteristics



Power Derating Curve



SOD-523 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.030
A1	0.010	0.070	0.000	0.003
A2	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.100	1.300	0.043	0.051
D1	1.500	1.700	0.059	0.067
E	0.750	0.850	0.030	0.033
L	0.200 REF		0.008 REF	
θ	7°REF		7°REF	