

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version



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	20	V
V_{RRM}	Working Peak Reverse Voltage		
V_{RWM}	DC Blocking Voltage		
V_R (RMS)	RMS Reverse Voltage	14	V
I_o	Average Rectified Output Current	0.5	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	5.5	A
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	667	$^{\circ}\text{C/W}$
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)

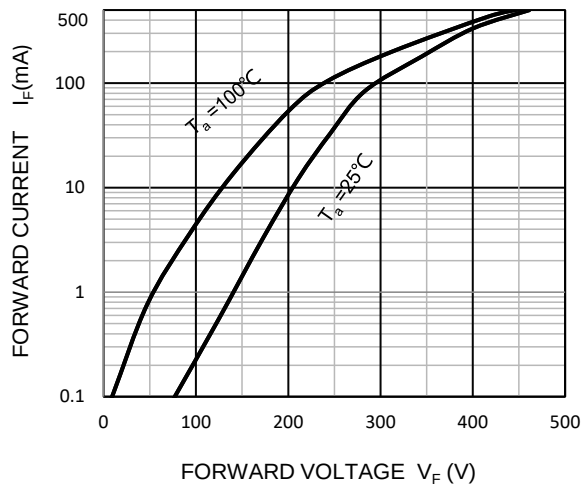
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Minimum reverse breakdown voltage	$I_R=250\mu\text{A}$	20	--	--	V
I_R	Reverse current	$V_R=10\text{V}$	--	--	50	μA
V_{F1}	Forward voltage	$I_F=0.1\text{mA}$	--	--	180	mV
V_{F2}		$I_F=1\text{mA}$	--	--	240	
V_{F3}		$I_F=10\text{mA}$	--	--	290	
V_{F4}		$I_F=100\text{mA}$	--	--	380	
V_{F5}		$I_F=500\text{mA}$	--	--	600	
C_T	Capacitance between terminals	$V_R=1\text{V}, f=1\text{MHz}$			30	pF

Ordering Information (Example)

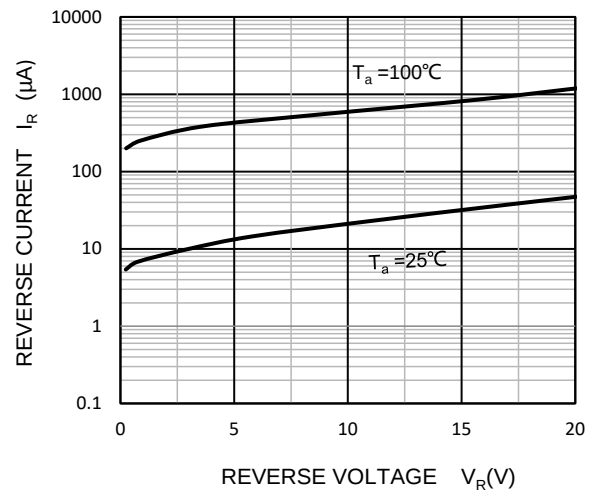
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
B0520X	SOD-523	SD	3,000	45,000	180,000	7"reel

Typical Operating Characteristics

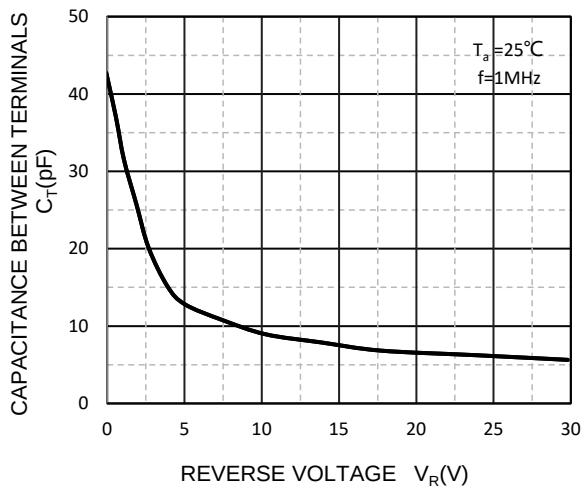
Forward Characteristics



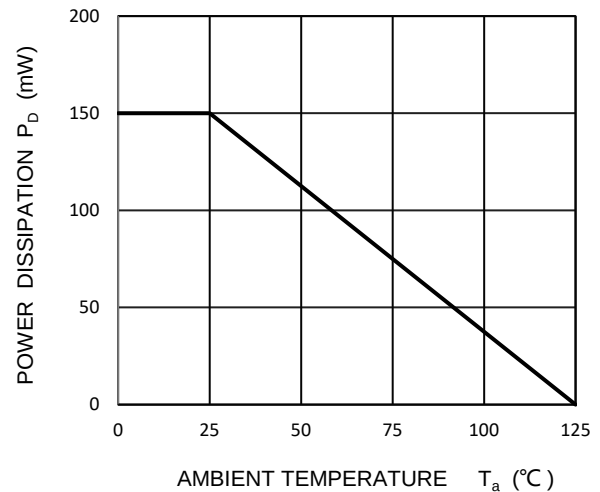
Reverse Characteristics



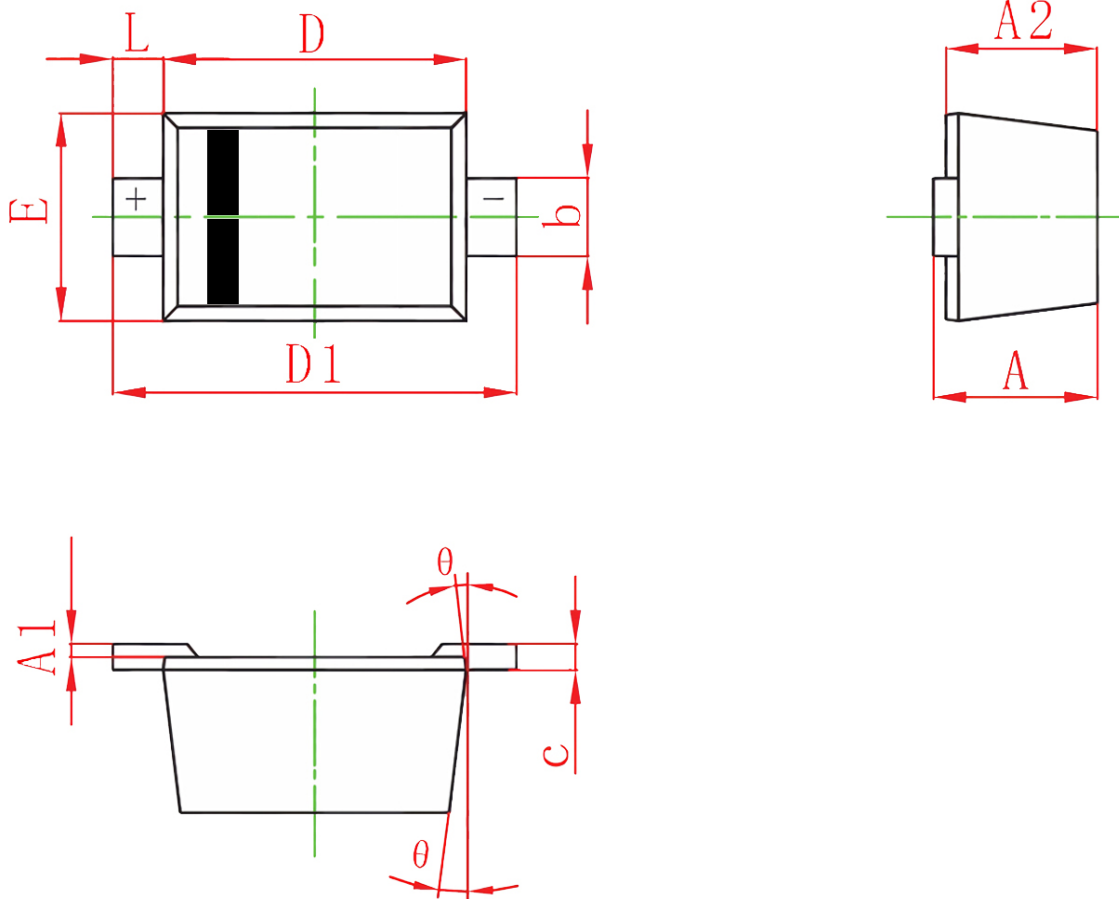
Capacitance Characteristics



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	