

Features

- Low Forward Voltage Drop
- Very Small SMD Package

Application

- Low Voltage Rectification
- High Efficiency DC/DC Conversion
- Switch Mode Power Supply
- Inverse Polarity Protection
- Low Power Consumption Applications



SOD-523 top view



Schematic diagram



Marking and pin assignment



Pb-Free



Halogen-Free

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

Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	40	V
I_O	Average Rectified Output Current	1	A
I_{FSM}	Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	7	A
P_D	Power Dissipation	0.5	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	250	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	$-40 \sim +125$	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	$-55 \sim +150$	$^{\circ}\text{C}$

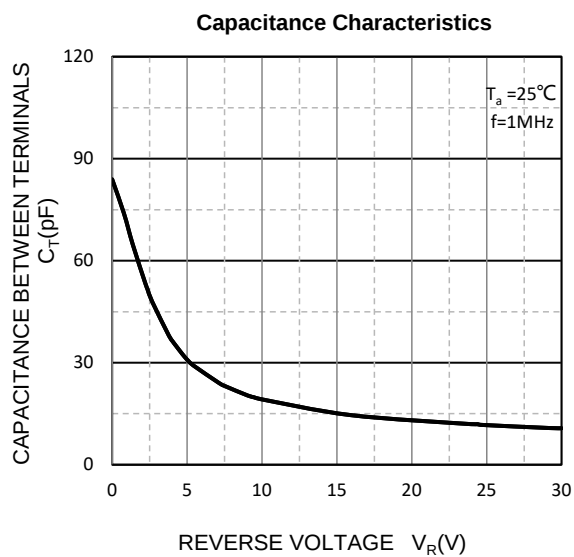
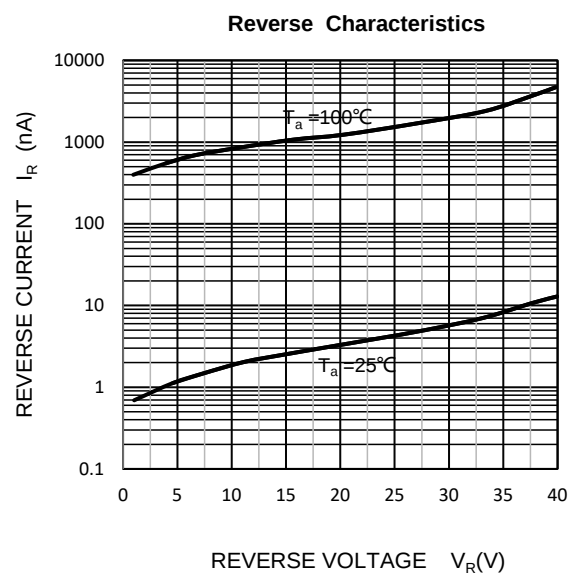
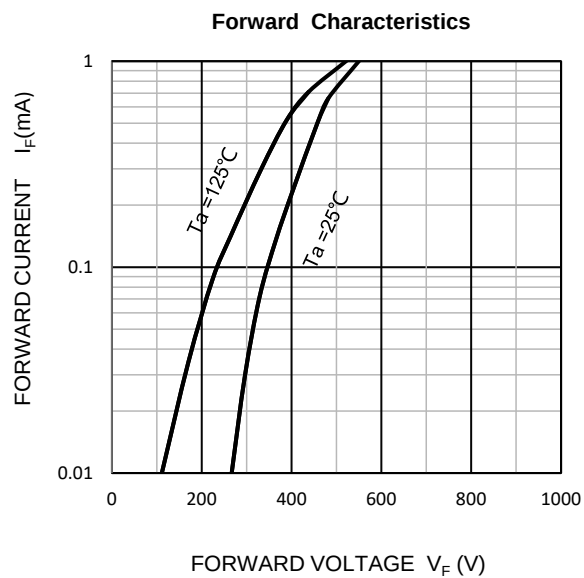
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=1\text{mA}$	40	--	--	V
I_R	Reverse current	$V_R=40\text{V}$	--	10	40	μA
V_F	Forward voltage	$I_F=0.1\text{A}$	--	0.35	0.38	V
		$I_F=0.2\text{A}$	--	0.37	0.40	V
		$I_F=0.5\text{A}$	--	0.42	0.49	V
		$I_F=0.7\text{A}$	--	0.47	0.55	V
		$I_F=1\text{A}$	--	0.51	0.61	V
C_T	Capacitance between terminals	$V_R=10\text{V}$, $f=1\text{MHz}$	--	--	19	pF

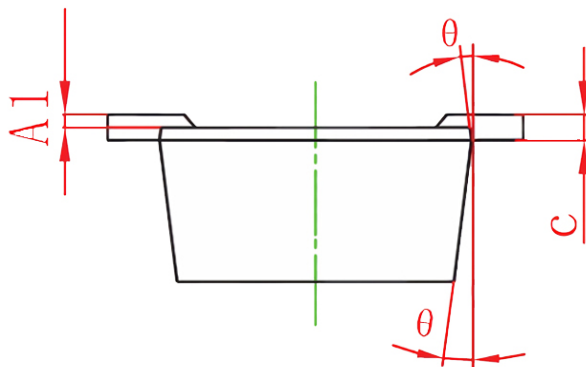
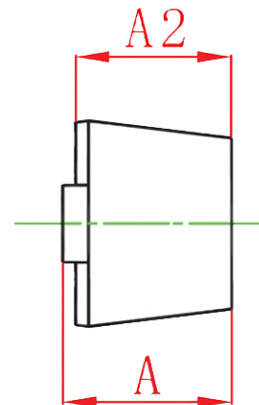
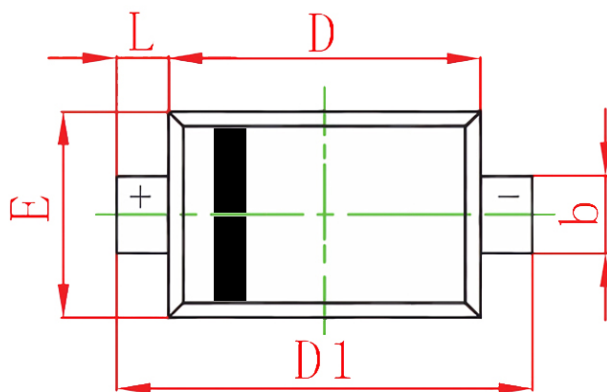
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
B1040X	SOD-523	4A	3,000	45,000	180,000	7"reel

Typical Operating Characteristics



SOD-523 Package Outline Dimensions



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	