

Features

- Low Forward Voltage Drop
- Very Small SMD Package

Applications

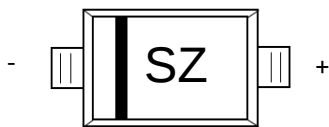
- Low Voltage Rectification
- High Efficiency DC/DC Conversion
- Switch Mode Power Supply
- Inverse Polarity Protection
- Low Power Consumption Applications



SOD-123 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_{RRM}	Maximum recurrent peak reverse voltage	40	V
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage		
I_O	Average Rectified Output Current	1	
I_{FSM}	Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	5	A
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal resistance junction to ambient air	400	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	-40~+125	$^{\circ}\text{C}$
T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

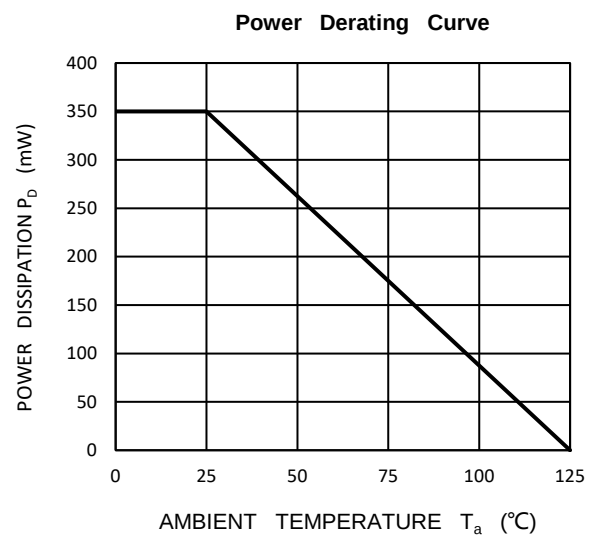
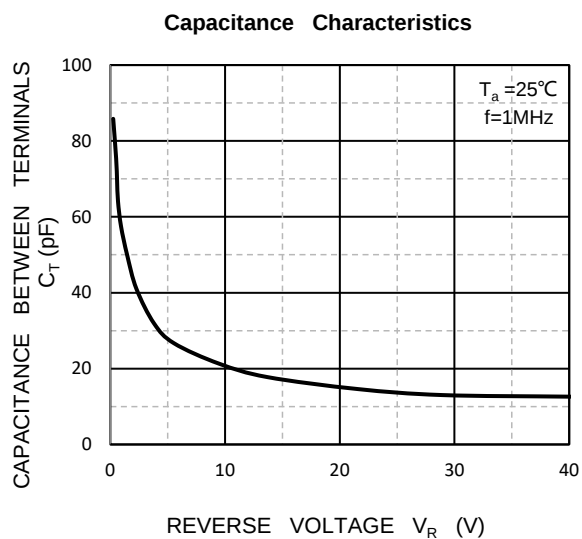
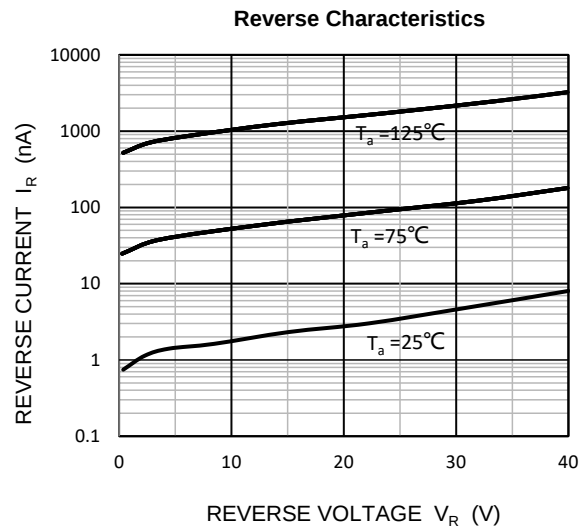
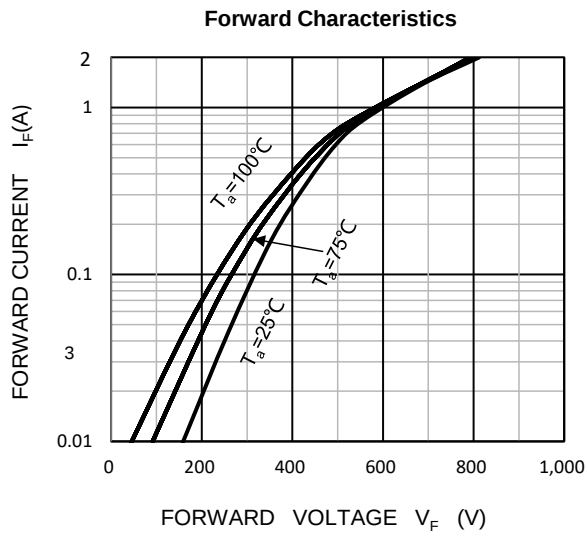
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=1\text{mA}$	40	--	--	V
I_R	Reverse voltage leakage current	$V_R=20\text{V}$	--	--	50	μA
V_F	Forward voltage	$I_F=0.5\text{A}$	--	--	0.51	V
		$I_F=0.7\text{A}$	--	--	0.55	V
C_{tot}	Total capacitance	$V_R=10\text{V}, f=1\text{MHz}$	--	--	20	pF

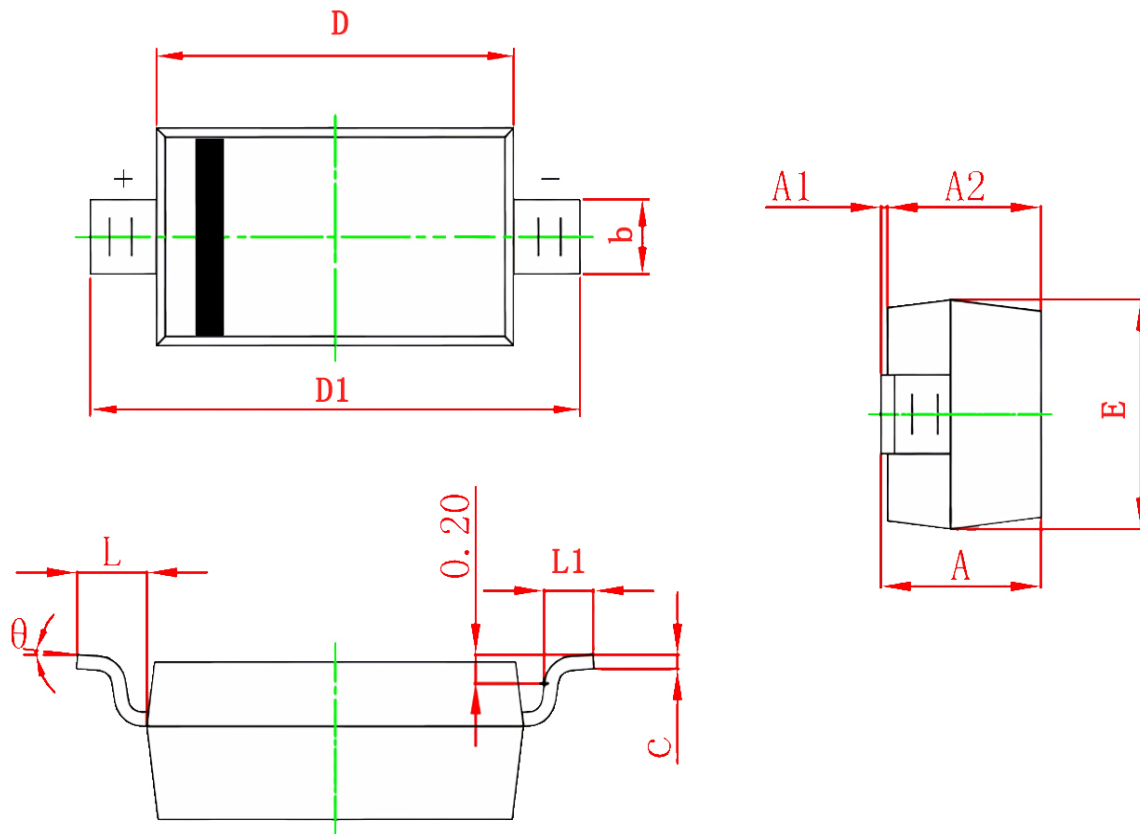
Ordering Information (Example)

Type	Package	Marking	Minimum	Inner Box	Outer	Delivery
B1040W	SOD-123	SZ	3,000	45,000	180,000	7"reel

Typical Operating Characteristics



SOD-123 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	2.600	2.800	0.102	0.110
D1	3.550	3.850	0.140	0.152
E	1.500	1.700	0.059	0.067
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°