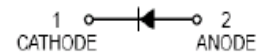


Features

- Low forward voltage drop
- High conductance
- Guard ring construction for transient protection



SOD-523



Schematic Diagram

Applications

- Switch mode power supply
- Low voltage rectification
- Reverse polarity protection

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

Parameter	Symbol	Max.	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Reverse Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	A
Average Rectified Output Current @ $T_L=100^\circ\text{C}$	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	2	A
Power Dissipation	P_D	200	mW
Typical Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	400	$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-65 To +125	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Typ.	Unit
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=130\mu\text{A}$	30	V
Maximum Forward Voltage Drop	V_{FM}	$I_F=0.1\text{A}, T_J=25^\circ\text{C}$	0.375	V
		$I_F=0.5\text{A}, T_J=25^\circ\text{C}$	0.430	
Maximum Leakage Current	I_{RM}	$V_R=15\text{V}, T_J=25^\circ\text{C}$	20	μA
		$V_R=30\text{V}, T_J=25^\circ\text{C}$	130	
Junction Capacitance	C_J	$f=1\text{MHZ}, V_R=0\text{V DC}$	170	pF

Typical Electrical Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

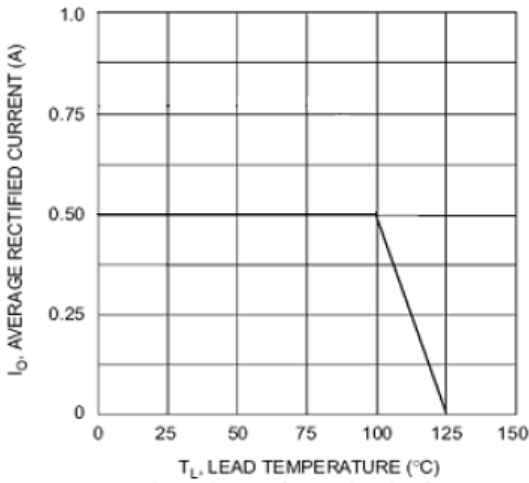


Figure 1. Forward Current Derating Curve

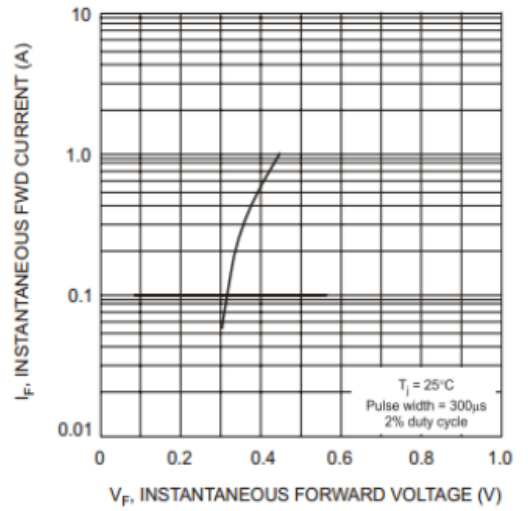


Figure 2. Typical Forward Characteristics

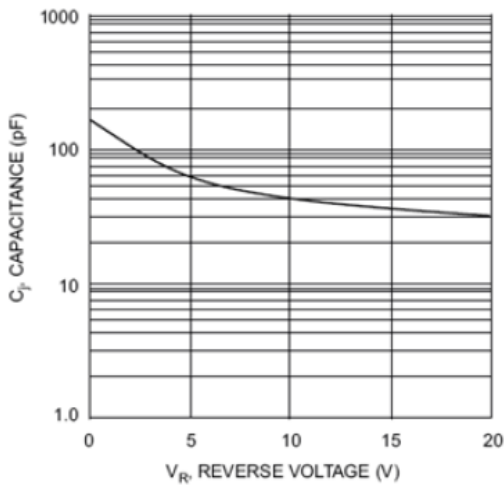
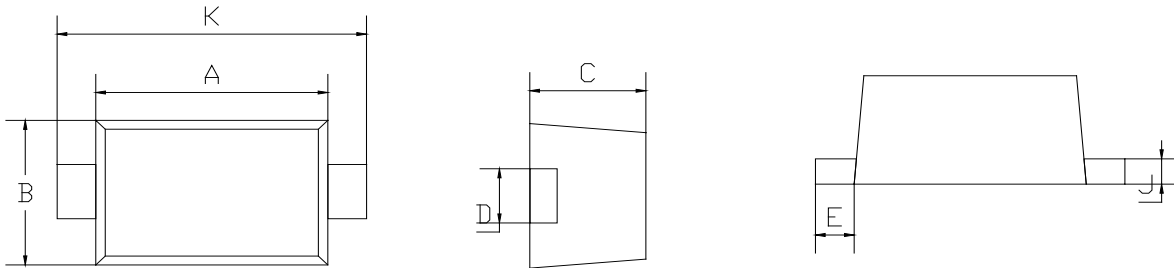


Figure 3. Typical Junction Capacitance vs. Reverse Voltage

Package Outline Dimensions (SOD-523)



SOD-523		
Dim	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
All Dimensions in mm		

Recommended Pad Layout

