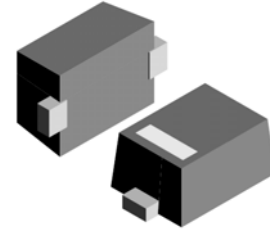


## Features

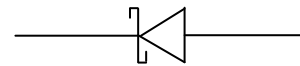
- SOD-923 Package
- Low forward voltage
- Forward current: 0.5A
- Reverse Voltage 30V
- MSL: Level 1 – unlimited



SOD-923

## Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Low voltage rectification
- High efficiency DC-to-DC conversion
- Low power consumption applications



Schematic Diagram

## Description

Planar Maximum Efficiency General Application (MEGA) schottky barrier diode with an integrated guard ring for stress protection encapsulated in a SOD-923 small package.

## Absolute Maximum Ratings

( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Max	Unit
Continuous reverse voltage	$V_{RRM}$			30	V
Repetitive peak forward current	$I_{FRM}$	$t_p \leq 1\text{ms}, \delta \leq 0.25$		2.5	A
Continuous forward current	$I_F$			0.5	A
Non-repetitive peak forward current	$I_{FSM}$	$t=8\text{ms}, \text{square wave}$		3.0	A
Junction temperature	$T_J$			150	$^{\circ}\text{C}$
Operating ambient temperature	$T_{AMB}^{(1)}$		-65	+150	$^{\circ}\text{C}$
Storage temperature	$T_{STG}^{(1)}$		-65	+150	$^{\circ}\text{C}$

### Notes:

1. For Schottky barrier diodes thermal run-away has to be considered, as in some applications the reverse power losses  $P_R$  are a significant part of the total power losses. Nomograms for determining the reverse power losses  $P_R$  and  $I_F(AV)$  rating will be available on request.

## Electrical Characteristics

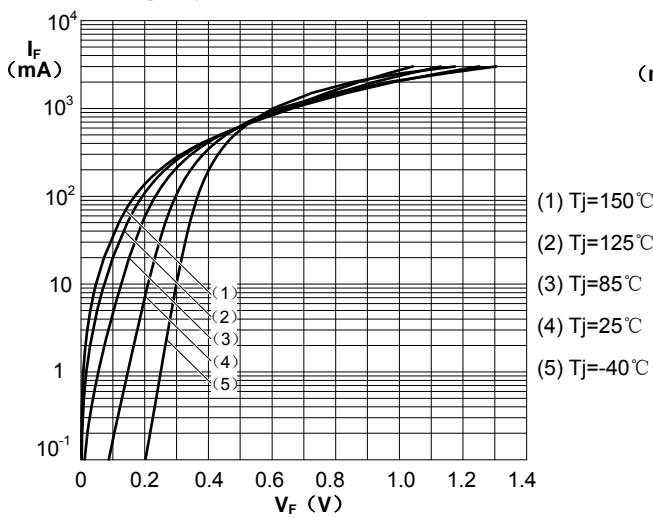
( $T_A=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Condition	Typ	Max	Unit
Continuous forward voltage	$V_F$	$I_F=10\text{mA}$	90	300	mV
		$I_F=100\text{mA}$	380	420	mV
		$I_F=200\text{mA}$	420	500	mV
		$I_F=500\text{mA}$	500	650	mV
Continuous reverse current	$I_R$	$V_R=10\text{V}$	2	200	$\mu\text{A}$
		$V_R=30\text{V}$	10	500	$\mu\text{A}$
Diode capacitance	$C_d$	$V_R=1\text{V}; f=1\text{MHz}$	24		pF

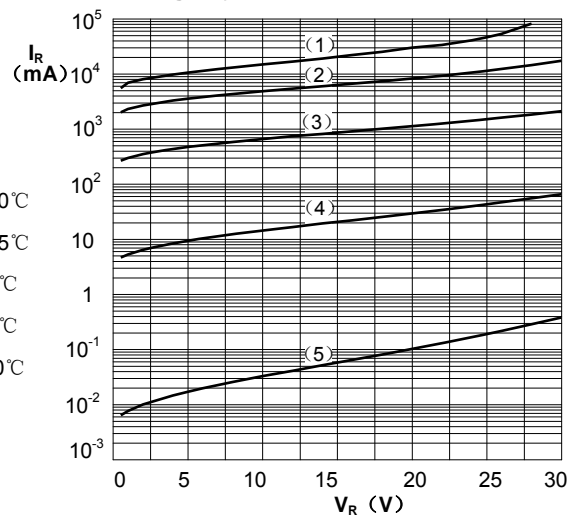
Pulse test:  $t_p \leq 300\mu\text{s}$ ;  $\delta \leq 0.02$

## Typical Characteristic Curves

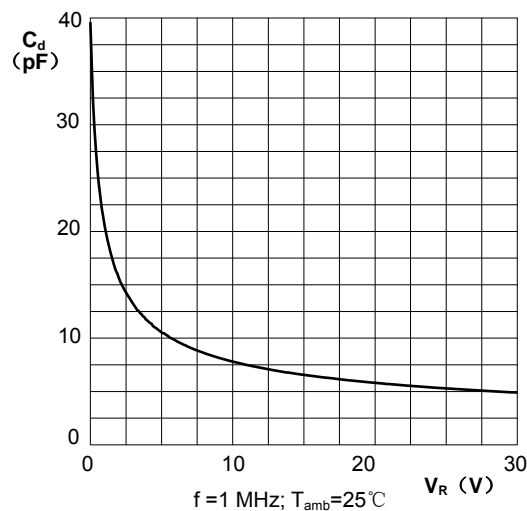
**Fig.1 Forward current as a function of forward Voltage; typical values**



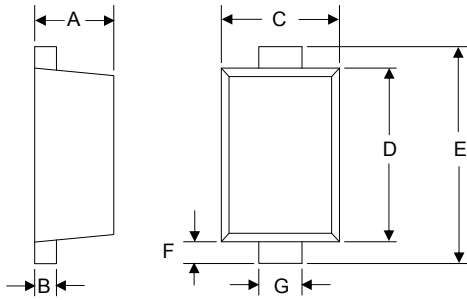
**Fig.2 Reverse current as a function of reverse voltage; typical values**



**Fig.3 Diode capacitance as a function of reverse Voltage; typical values**

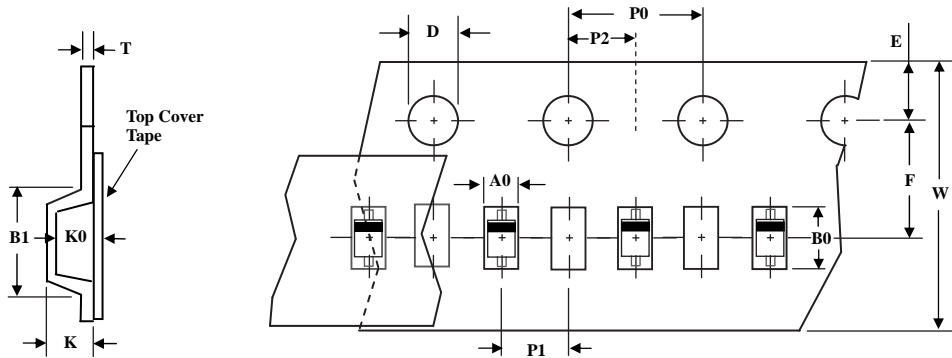


### Product Dimensions



Dim	Millimeters	
	min	max
A	0.36	0.43
B	0.07	0.17
C	0.55	0.65
D	0.75	0.85
E	0.95	1.05
F	0.05	0.15
G	0.15	0.25

### Package Information



TapeSize(W)	B1 max	D	E	F	K max	P0	P1	P2	T max	W max
8	4.55	1.55±0.05	1.75±0.1	3.5±0.05	2.4	4.0±0.1	2.0±0.05	2.0±0.05	0.6	8.3

Note:1. Unit : mm

2. A0, B0, and K0 are determined by component size. The clearance between the components and the cavity must be within 0.05mm min to 0.50 mm max. The component cannot rotate more than 10° within the determined cavity.

### Marking

