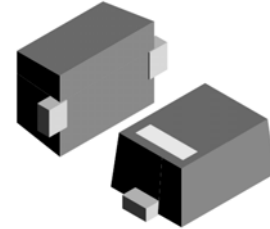
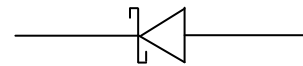


Features

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



SOD-923



Schematic Diagram

Applications

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

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	μA
		$V_R=30\text{V}$	10	500	μA
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

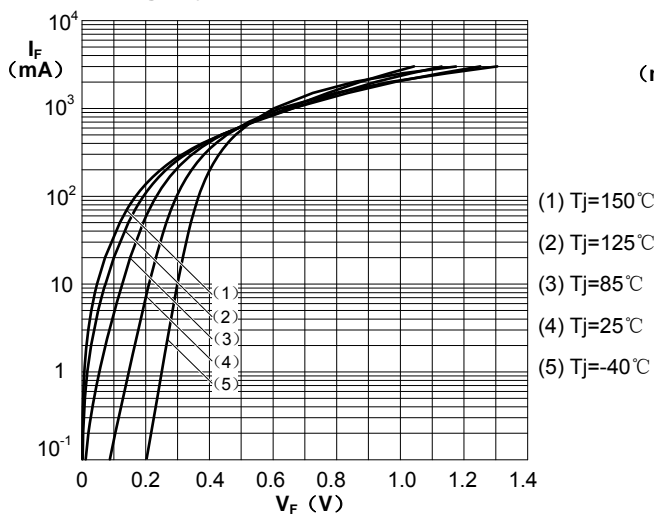


Fig.2 Reverse current as a function of reverse voltage; typical values

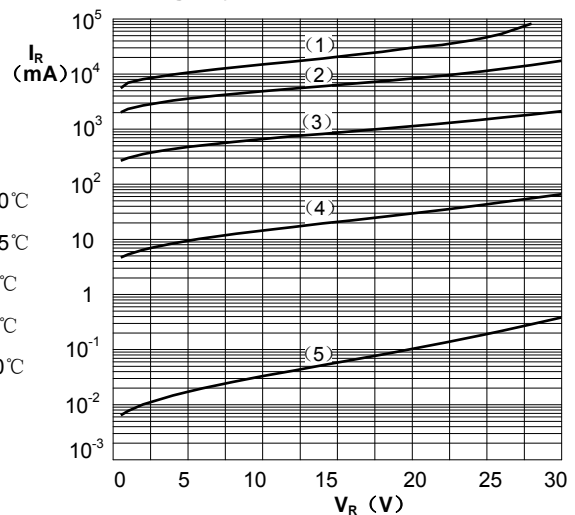
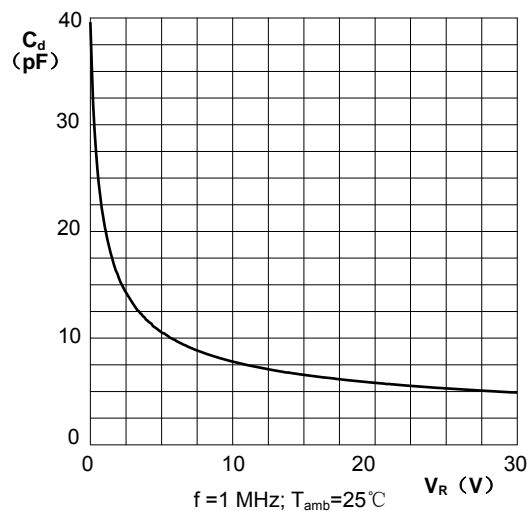
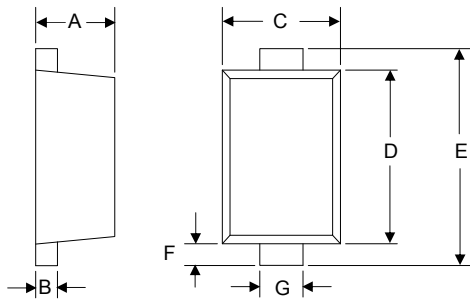


Fig.3 Diode capacitance as a function of reverse Voltage; typical values

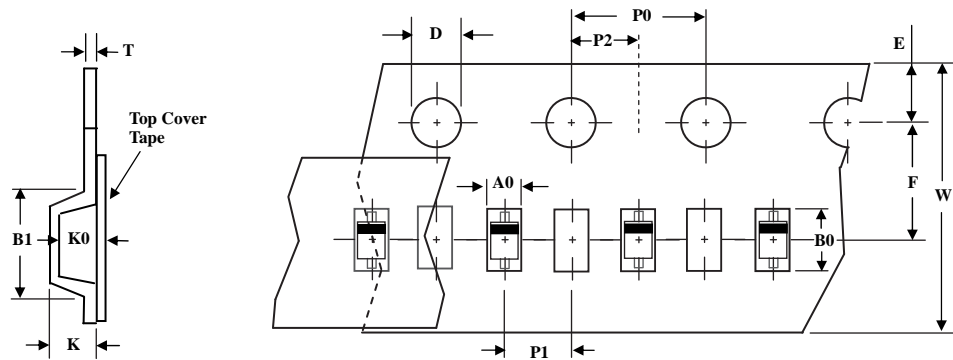


Product Dimensions



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

