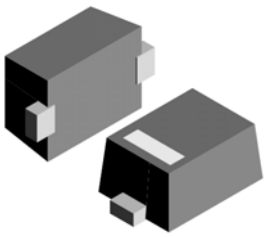
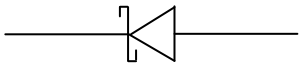
S2005ELD

Feature

- SOD-923 Package
- Very low forward voltage
- Forward current: 0.5A
- Reverse Voltage 20V
- MLS: Lever 1 – unlimited



SOD-923



Schematic Diagram

Application

- 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℃, Unless otherwise specified.)

Parameter	Symbol	Condition	Min	Max	Unit
Continuous reverse voltage	V_{RRM}			20	V
Repetitive peak forward current	I_{FRM}	$t_p \leq 1ms$, $\delta \leq 0.25$		2.5	A
Continuous forward current	I_F			0.5	A
Non-repetitive peak forward current	I_{FSM}	t=8ms,square wave		3.0	A
Junction temperature	T_j			150	℃
Operating ambient temperature	T_{amb} (1)		-65	+150	℃
Storage temperature	T_{stg} (1)		-65	+150	℃

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

Electrical Characteristics

(T_A=25℃, Unless otherwise specified.)

Parameter	Symbol	Condition	Typ	Max	Unit
Continuous forward voltage	V_F	I_F=0.1mA	125	190	mV
		I_F=1mA	185	240	mV
		I_F=10mA	250	310	mV
		I_F=100mA	325	420	mV
		I_F=500mA	450	650	mV
Continuous reverse current	I_R	V_R=10V	4	30	μA
		V_R=20V	10	100	μA
Diode capacitance	C_d	V_R=1V;f=1MHz	24		pF

Pulse test:tp≤300μs; δ≤0.02

Typical Characteristic Curves

Fig.1 Forward current as a function of forward voltage (typical values)

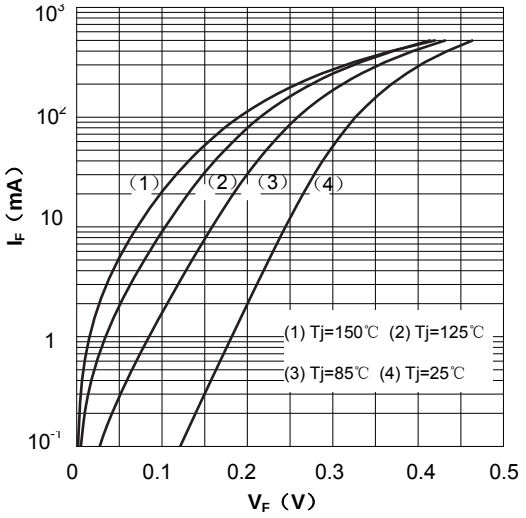


Fig.2 Reverse current as a function of reverse voltage (typical values)

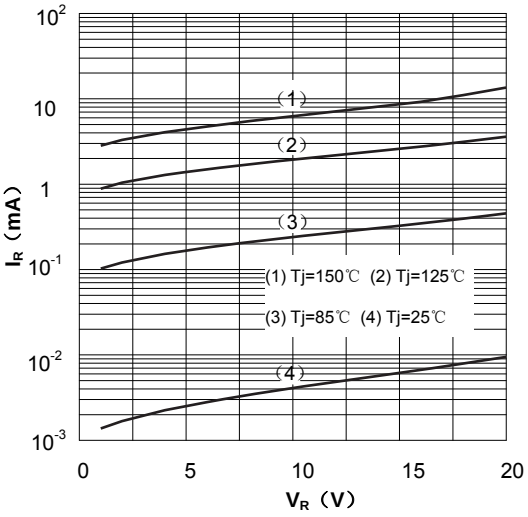
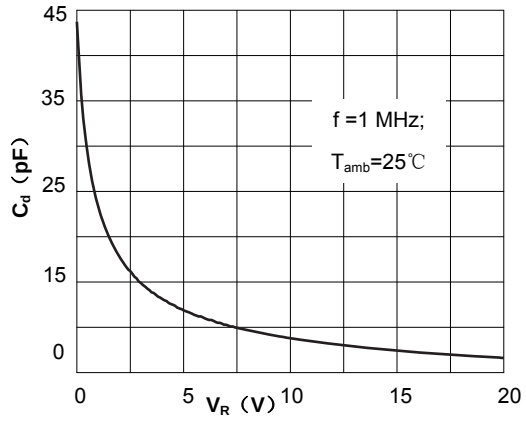
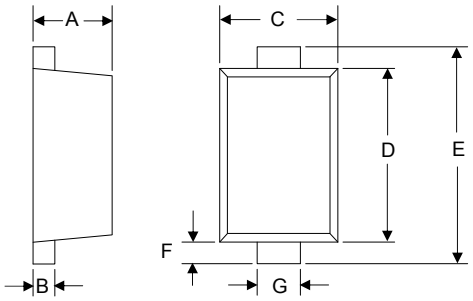


Fig.3 Diode capacitance as a function of reverse Voltage;typical values

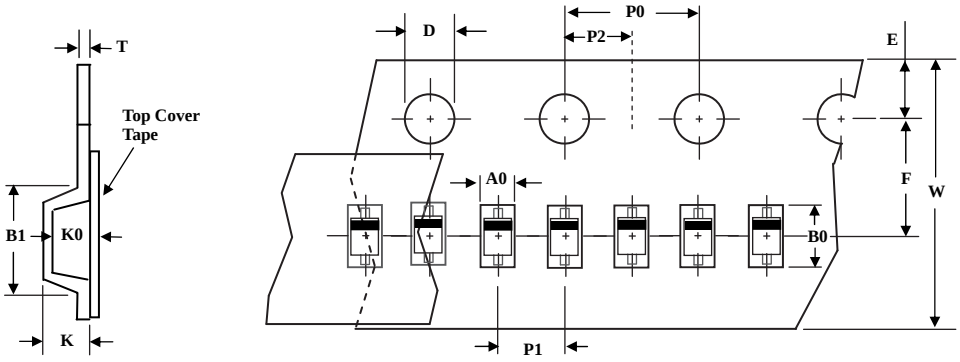


Product Dimension



Dim	millmeters	
	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

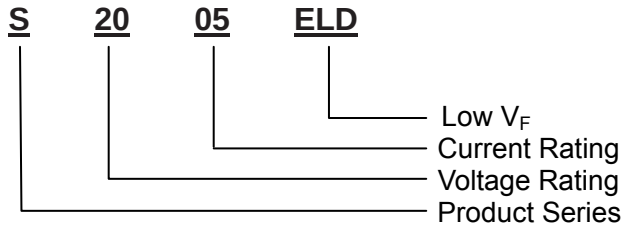


TapeSize(W)	B1 max	D	E	F	K max	P0	P1	P2	T max	W max
8	4.55	1.55±0.05	1.75±0.1	3.5±0.05	2.4	4.0±0.1	2.0±0.05	2.0±0.05	0.6	8.3

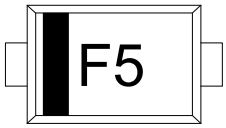
Note:1.Unit : mm

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.

Part Number System



Marking



Order Information

Device	Package	Net Weight	Carrier	Quantity	HSF Status
S2005ELD	SOD-923	0.0006g	Tape & Reel	8000pcs	RoHS compliant

Revision history

Date	Revision	Description of changes
13-September-2011	A0	First issue
25-October-2016	A1	Update qty per reel