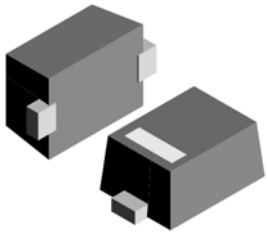
GOOD-ARK SEMICONDUCTOR

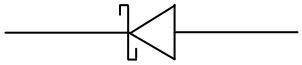
GS3005ELD
Schottky Barrier Diode

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°C unless otherwise specified)

Parameter	Symbol	Condition	Min	Max	Unit
Continuous reverse voltage	V_{RRM}			30	V
Repetitive peak forward current	I_{FRM}	$t_p \leq 1ms$, $\delta \leq 0.25$		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	°C
Operating ambient temperature	T_{AMB}(1)		-65	+150	°C
Storage temperature	T_{STG}(1)		-65	+150	°C

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°C unless otherwise specified)

Parameter	Symbol	Condition	Typ	Max	Unit
Continuous forward voltage	V_F	I_F=10mA	90	300	mV
		I_F=100mA	380	420	mV
		I_F=200mA	420	500	mV
		I_F=500mA	500	650	mV
Continuous reverse current	I_R	V_R=10V	2	200	μA
		V_R=30V	10	500	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

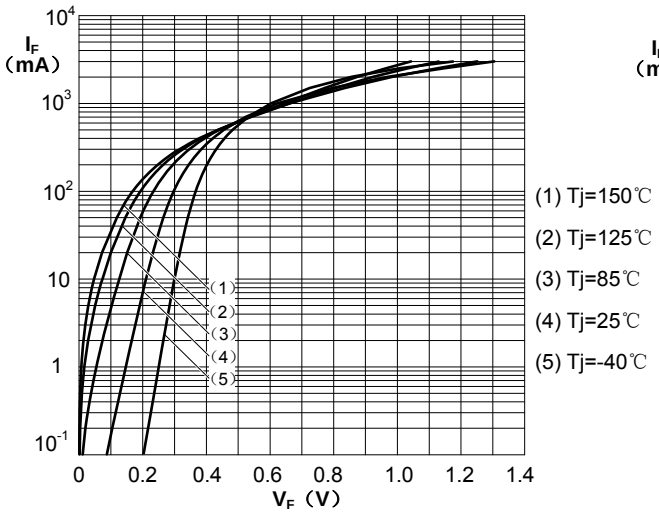


Fig.2 Reverse current as a function of reverse voltage; typical values

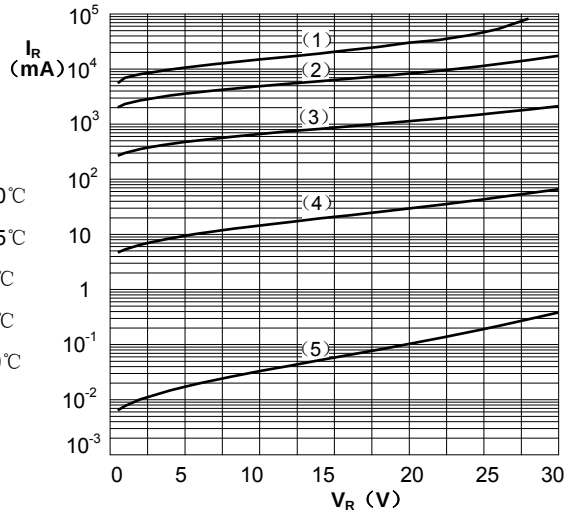
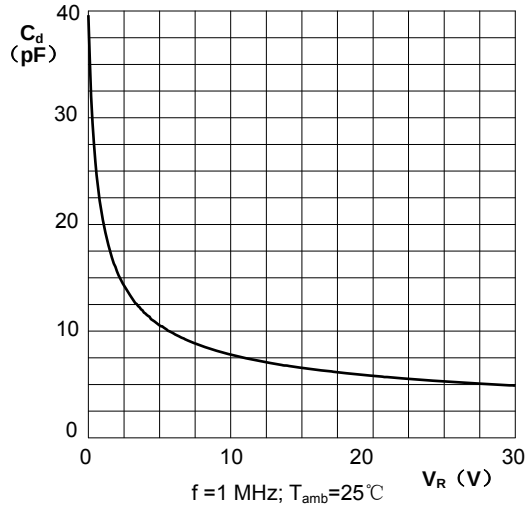
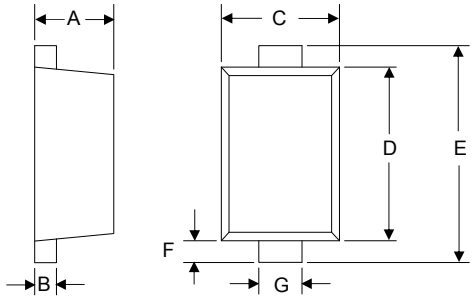


Fig.3 Diode capacitance as a function of reverse Voltage; typical values

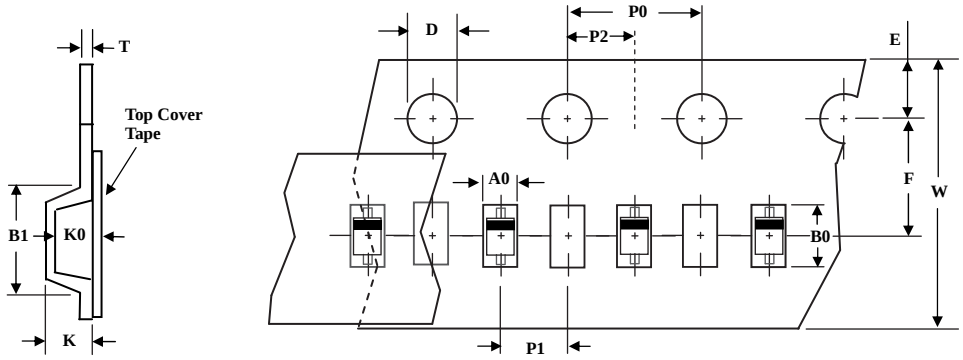


Product Dimensions



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.

Marking