

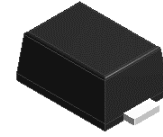
## 1A,100V Schottky Barrier Rectifier

### Features

- Low leakage current
- Schottky barrier diode
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds
- AEC-Q101 qualified



**RoHS**  
COMPLIANT



eSGP(SOD-323F)

### Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings & Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	ASGP011BSL	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	100	V
Maximum RMS voltage	V <sub>RMS</sub>	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	100	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	1	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	30	A
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

Thermal-Mechanical Specifications (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	120	°C/W
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	40	°C/W
Thermal Resistance, Junction to Lead	R <sub>θJL</sub>	40	°C/W

## Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	SGP011BSL	Unit
Forward Drop Voltage	V <sub>F</sub>	I <sub>F</sub> =1A	0.80	V
Reverse leakage current @V <sub>R</sub>	I <sub>R</sub>	T <sub>J</sub> =25°C	20	uA
Typical junction capacitance	C <sub>J</sub>	4.0 V 1 MHZ	24	pF

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

## Ratings and Characteristics Curves

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

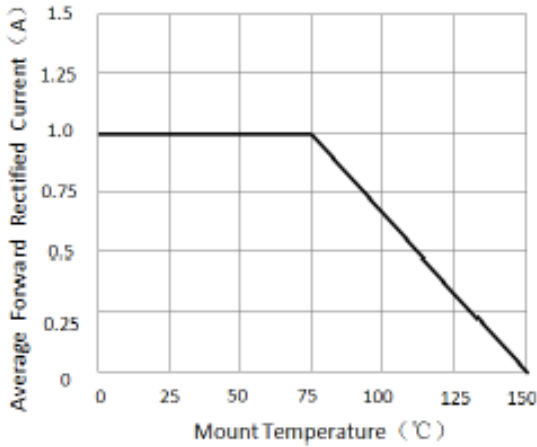


Figure 1. Forward Current Derating Curve

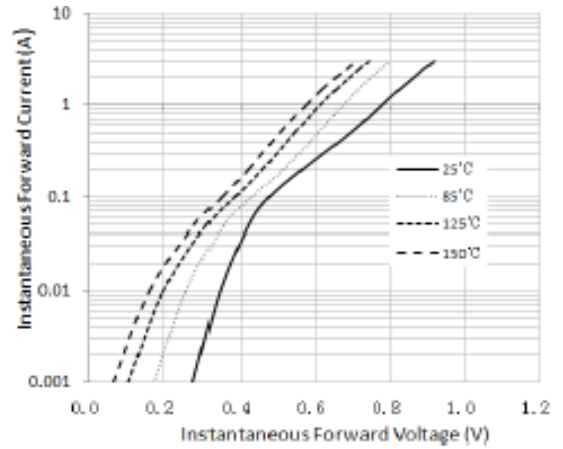


Figure 2. Typical Instantaneous Forward Characteristics

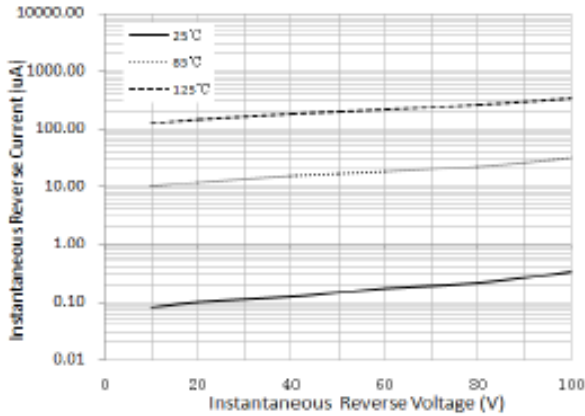


Figure 3. Typical Reverse Characteristics

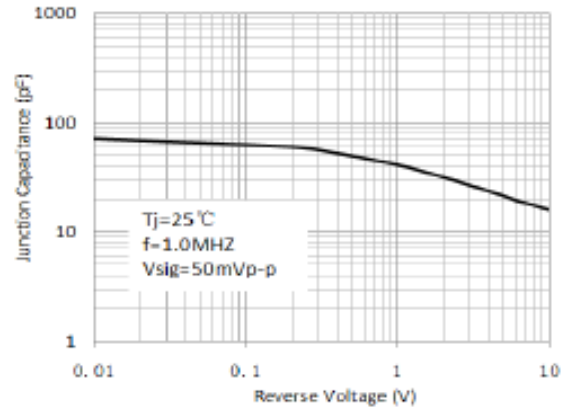


Figure 4. Typical Junction Capacitance

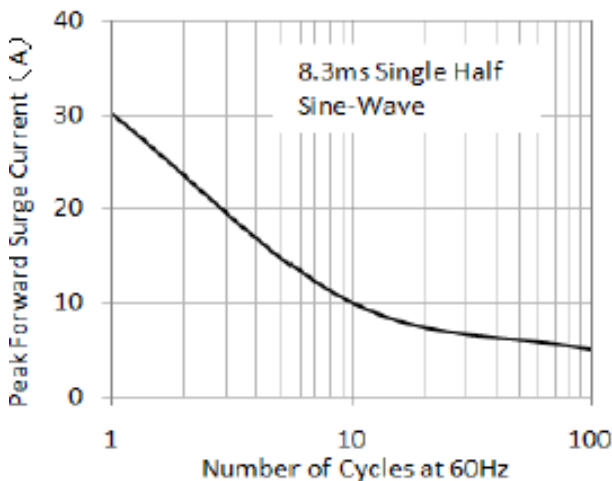
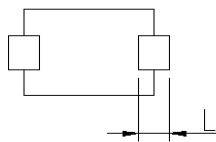
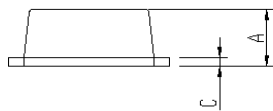
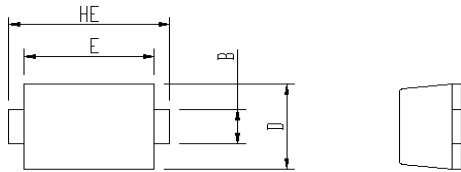


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

## Package Outline Dimensions

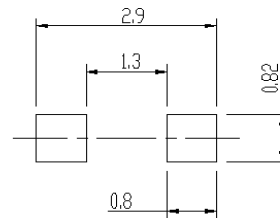
in inches (millimeters)

### eSGP (SOD-323F)



Package	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
B	0.5	0.7	0.020	0.028
C	0.1	0.25	0.004	0.010
D	1.4	1.6	0.055	0.063
E	2.0	2.2	0.079	0.087
L	0.35	0.65	0.014	0.026
HE	2.4	2.8	0.094	0.110

Soldering footprint



## Revision History

Document Version	Date of release	Discription of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.24	Modify document format

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