

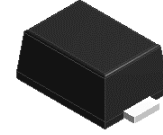
## 1A,40-60V Schottky Barrier Rectifiers

### Features

- Low leakage current
- Schottky barrier diodes
- 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



**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	SGP0140SL	SGP0160SL	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	40	60	V
Maximum RMS voltage	V <sub>RMS</sub>	28	42	V
Maximum DC blocking voltage	V <sub>DC</sub>	40	60	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 +125		°C
Storage temperature range	T <sub>STG</sub>	-55 to +125		°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



# SGP0140SL thru SGP0160SL

GOOD-ARK Electronics

<b>Electrical Specifications</b> ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)					
Parameter	Symbol	Test Conditions	SGP0140SL	SGP0160SL	Unit
Forward Drop Voltage	$V_F$	$I_F=1\text{A}$	0.55	0.70	V
Reverse leakage current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	0.20		mA
		$T_J=125^{\circ}\text{C}$	30		
Typical junction capacitance	$C_J$	4.0 V 1 MHz	45		pF

Note:

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

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

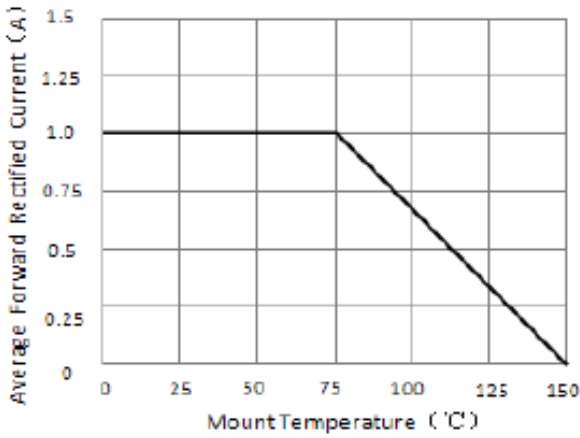


Figure 1. Forward Current Derating Curve

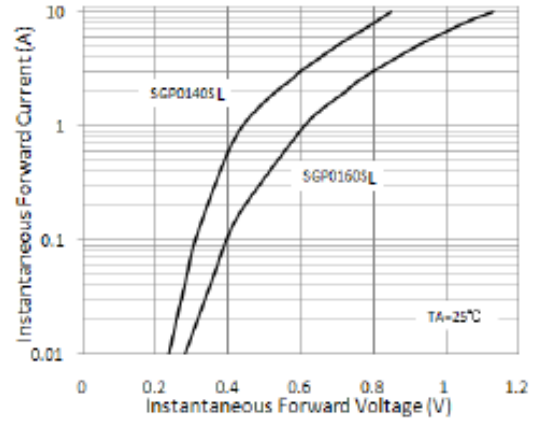


Figure 2. Typical Instantaneous Forward Characteristics

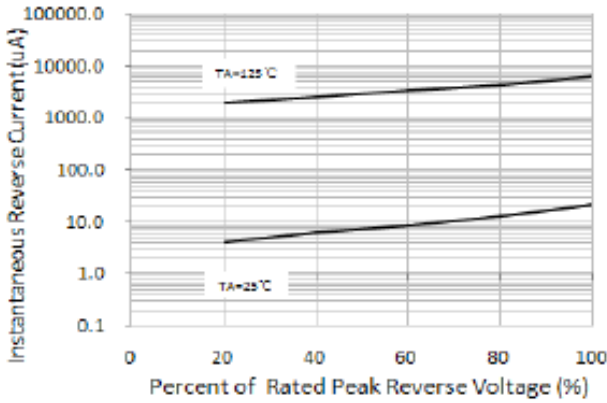


Figure 3. Typical Reverse Characteristics

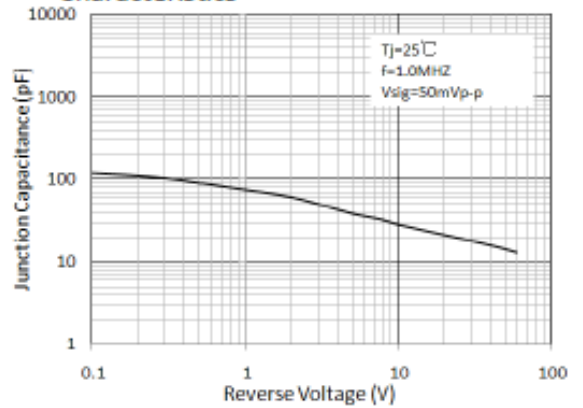


Figure 4. Typical Junction Capacitance

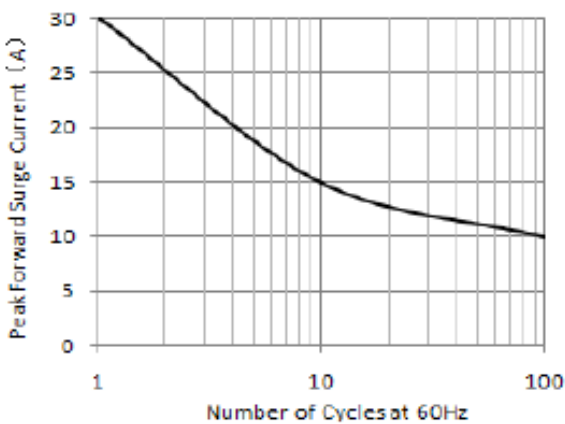
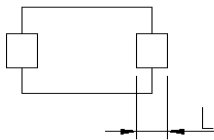
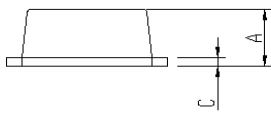
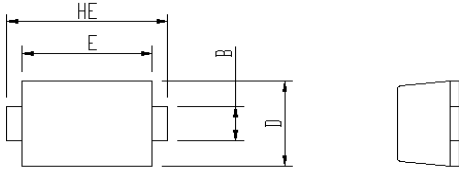


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

## Package Outline Dimensions

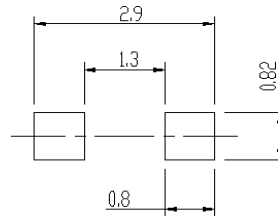
in inches (millimeters)

### 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	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.10.16	Modify document format

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