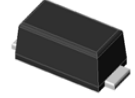


## Features

- Low forward voltage drop
- Low leakage current
- Low profile - typical height of 1.0 mm
- Moisture sensitivity: level 1, per J-STD-020
- Glass passivated chip and super fast switching time
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



Package: eSGP  
(SOD-323F)



**RoHS**  
COMPLIANT

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

Parameter	Symbol	GSGP4U	GSGP5U	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	400	600	V
Maximum RMS Voltage	$V_{RMS}$	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	25		A
Operating Junction and Storage Temperature Range	$T_J$ , $T_{STG}$	- 55 to + 150		$^\circ\text{C}$

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

Parameter	Test Conditions	Symbol	GSGP4U	GSGP5U	Unit
Maximum Instantaneous Forward Voltage	1 A	$V_F$	1.3(typ:1.0)	1.7(typ:1.25)	V
Maximum DC Reverse Current	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5 50		$\mu\text{A}$
Maximum Reverse Recovery Time	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$	$t_{rr}$	35		nS
Typical Junction Capacitance	4.0 V, 1 MHz	$C_J$	6.2	4.3	pF
Typical Thermal Resistance <sup>1)</sup>	Junction to Ambient	$R_{\theta JA}$	97		$^\circ\text{C/W}$
	Junction to Lead	$R_{\theta JL}$	27		

Note: 1), The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5×5mm copper pads, 2 OZ, FR4 PCB

## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

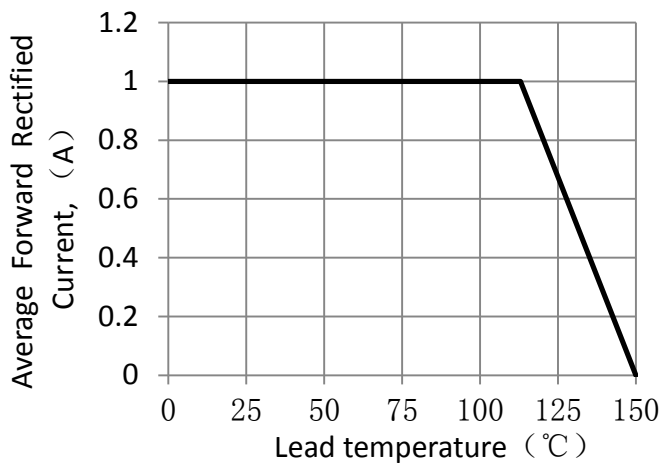


Figure 1. Forward Current Derating Curve

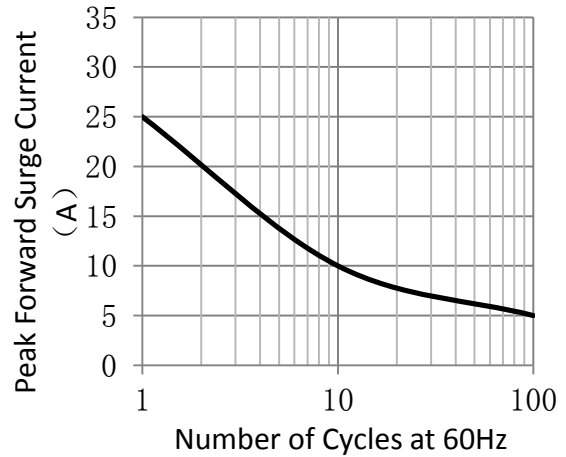


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

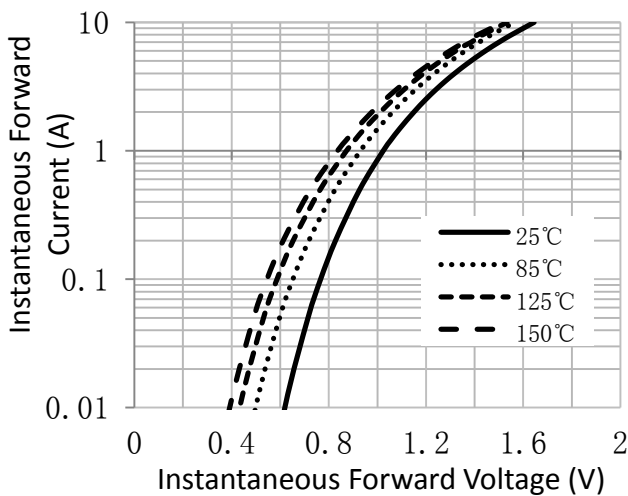


Figure 3. Typical Instantaneous Forward Characteristics (SGP4U)

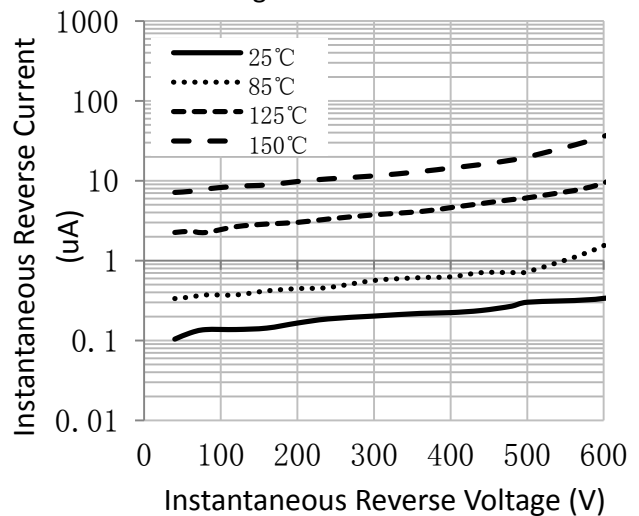


Figure 4. Typical Reverse Characteristics

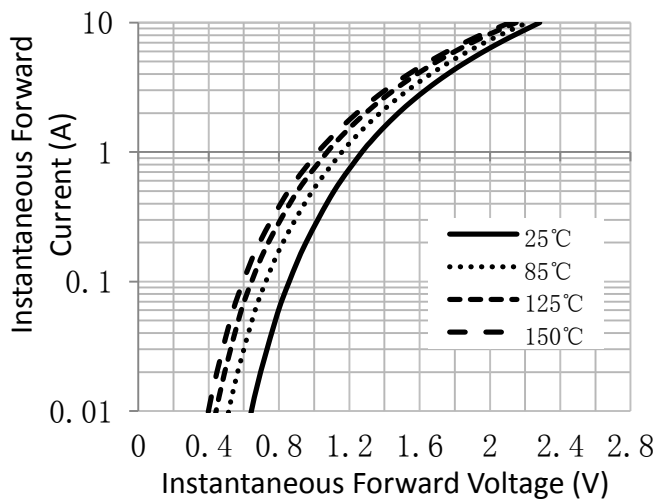


Figure 3. Typical Instantaneous Forward Characteristics (SGP5U)

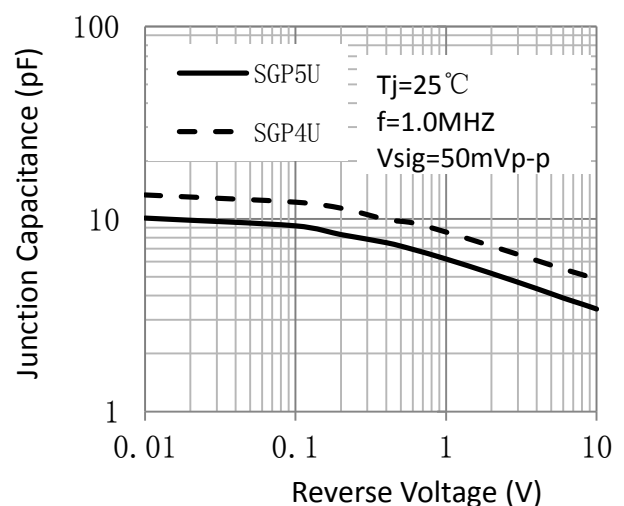
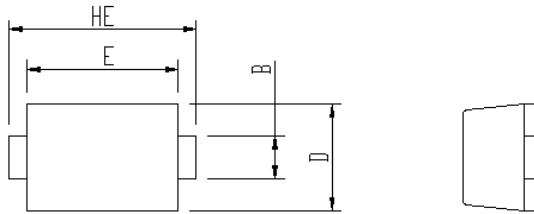


Figure 5. Typical Junction Capacitance

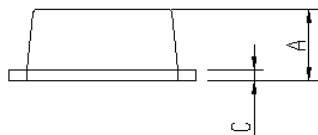
# GSGP4U thru GSGP5U

Surface Mount Glass Passivated Super Fast Rectifier  
 Reverse Voltage 400-600V Forward Current 1A

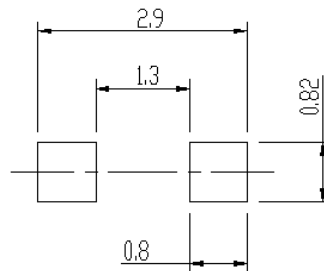
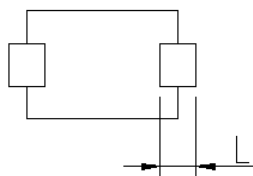
## Package Outline Dimensions



Package	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
eSGP				
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



## Packing Information

### Packing quantities

- 1), 3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel
- 2), 10000 pcs/Reel, 16 Reels/Box; 8mm Tape, 13" Reel

### Tape & Reel Specification

