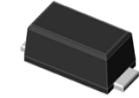


Features

- 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)

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	$T_A=25^\circ\text{C}$	I_R	5		μA
	$T_A=125^\circ\text{C}$		50		
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 ¹⁾	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)

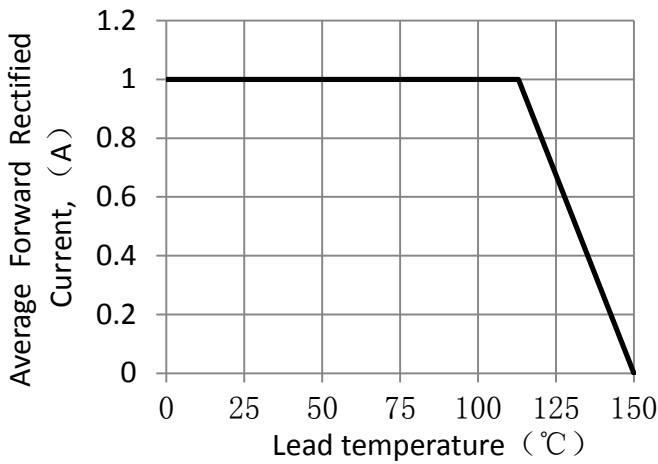


Figure 1. Forward Current Derating Curve

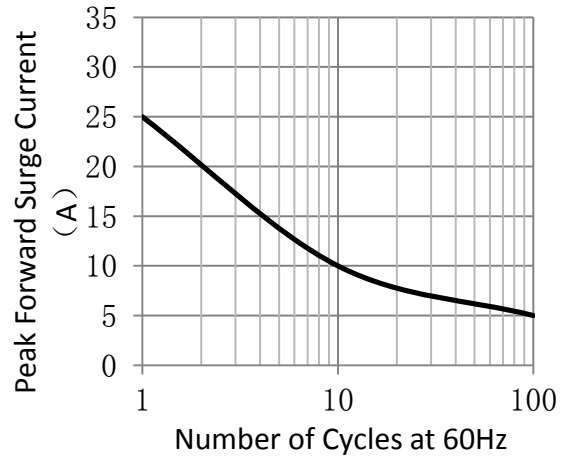


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

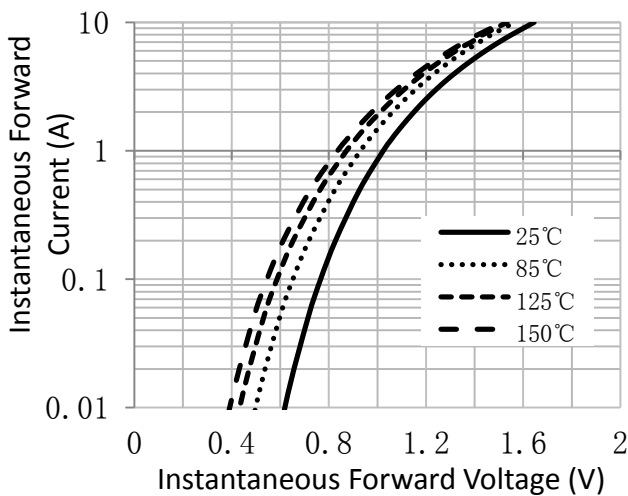


Figure 3. Typical Instantaneous Forward Characteristics (SGP4U)

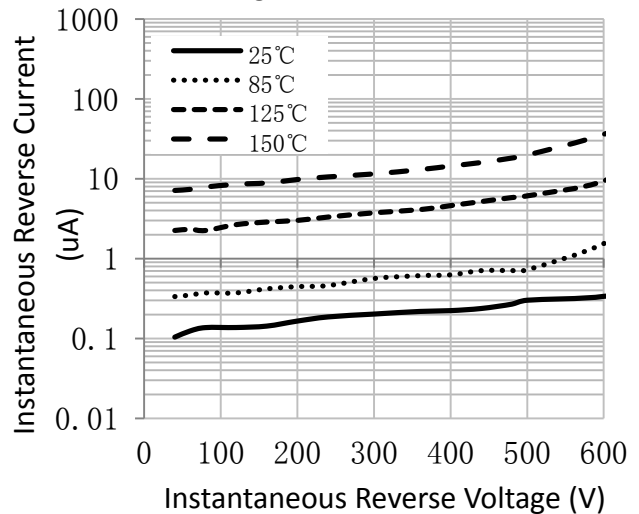


Figure 4. Typical Reverse Characteristics

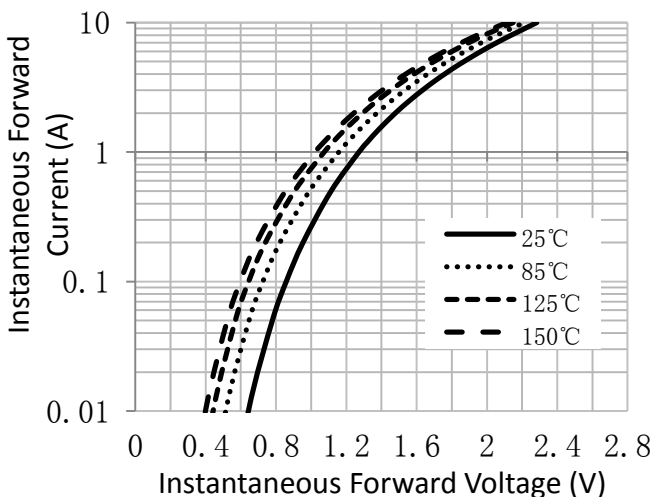


Figure 3. Typical Instantaneous Forward Characteristics (SGP5U)

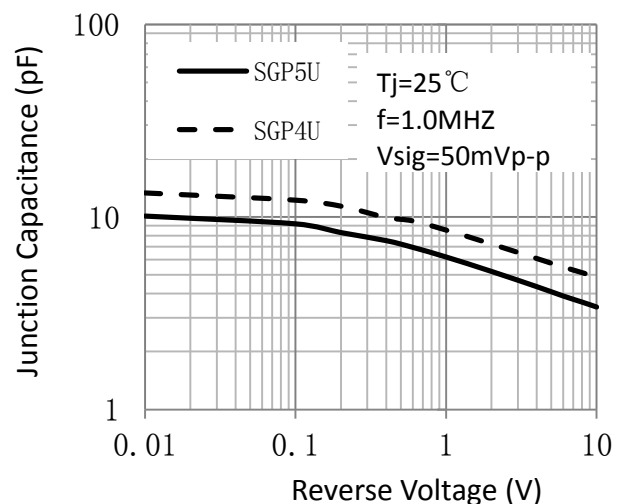
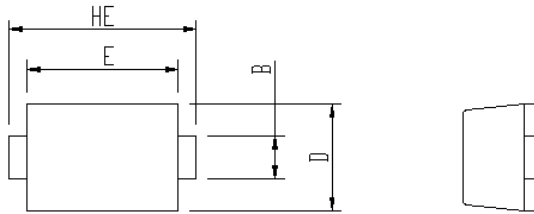


Figure 5. Typical Junction Capacitance

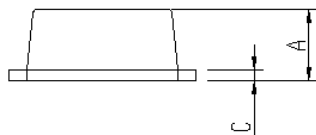
GSGP4U thru GSGP5U

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

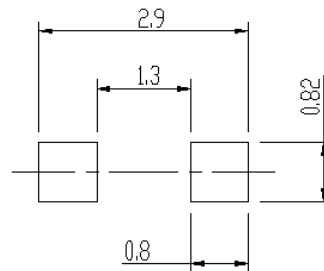
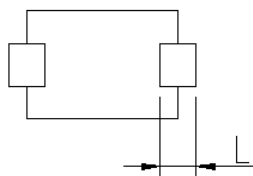
Package Outline Dimensions



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

