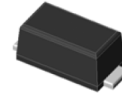


Features

- 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



RoHS
COMPLIANT



eSGP(SOD-323F)

Typical Applications

For use of fast switch rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	SGP4U	SGP5U	Unit
Maximum repetitive peak reverse voltage	VRRM	400	600	V
Maximum RMS voltage	VRMS	280	420	V
Maximum DC blocking voltage	VDC	400	600	V
Maximum average forward rectified current	IF(AV)	1.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	25		A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150		°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	SGP4U	SGP5U	Unit
Maximum instantaneous forward voltage	1 A	V _F	1.3(typ:1.0)	1.7(typ:1.25)	Volts
Maximum DC reverse current	TA=25℃ TA=125℃	I _R	5 50		μA
Maximum reverse recovery time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	35		nS
Typical junction capacitance	4.0 V, 1 MHz	C _J	6.2	4.3	pF
Typical thermal resistance ¹⁾	juntion to ambient	R _{θJA}	97		℃/W
	juntion to lead	R _{θJL}	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

(TA = 25°C unless otherwise noted)

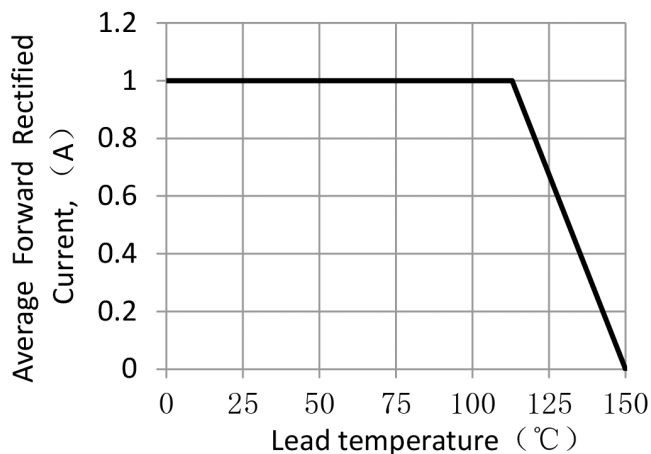


Figure 1. Forward Current Derating Curve

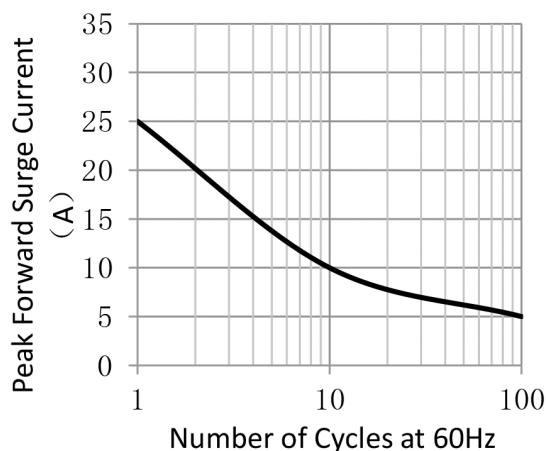


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

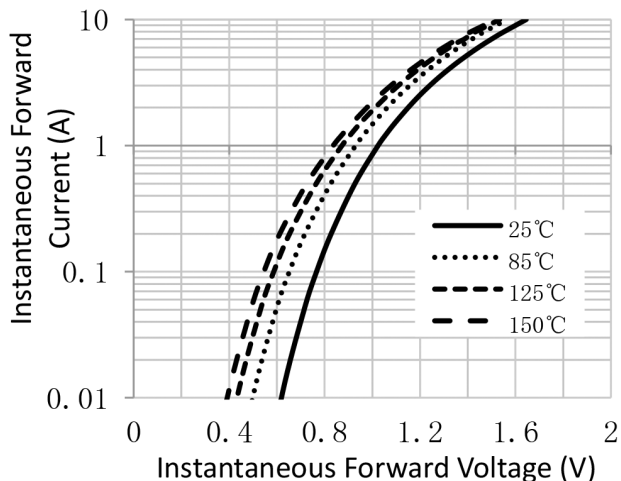


Figure 3. Typical Instantaneous Forward Characteristics (SGP4U)

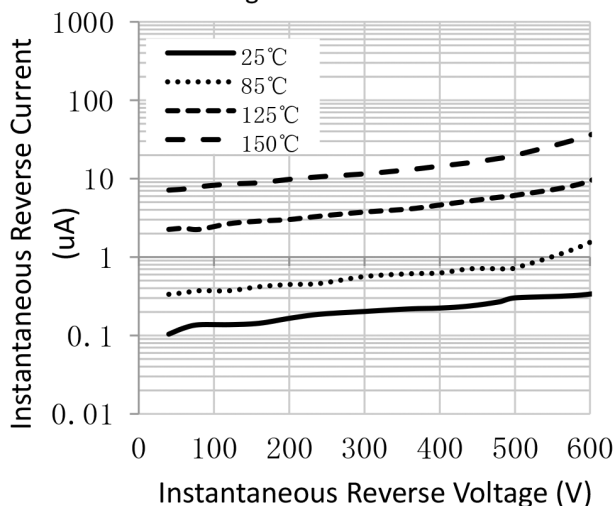


Figure 4. Typical Reverse Characteristics

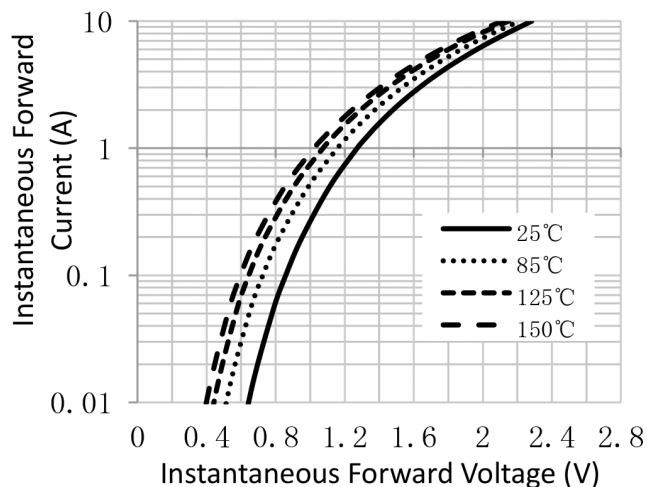


Figure 3. Typical Instantaneous Forward Characteristics (SGP5U)

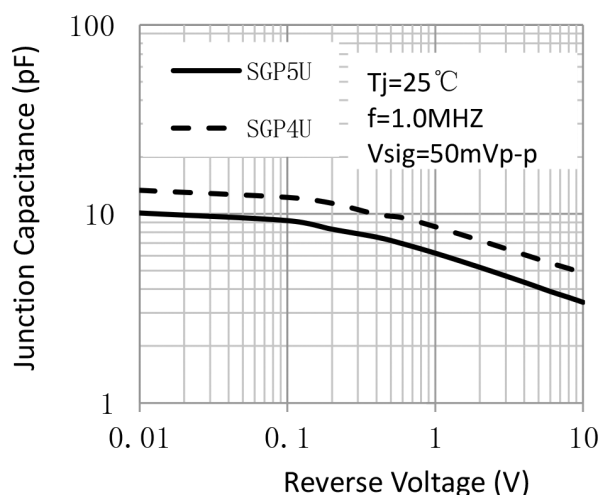
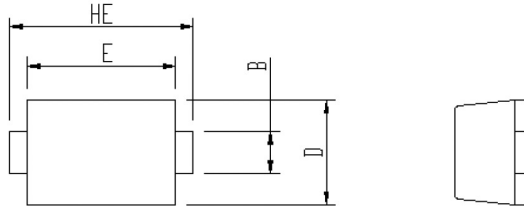
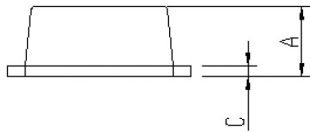


Figure 5. Typical Junction Capacitance

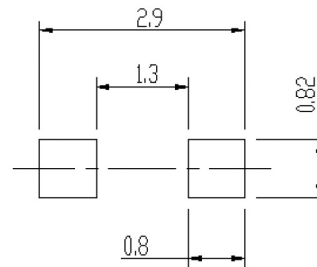
Package Outline Dimensions



Package	Unit:mm		Unit:inch	
eSGP	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



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

