

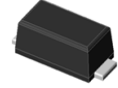


SGP1R thru SGP7R

Surface Mount Glass Passivated Fast Recovery Rectifier
Reverse Voltage 50~1000V Forward Current 1A

Features

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



eSGP(SOD-323F)

Typical Applications

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

Maximum Ratings (TA = 25 °C unless otherwise noted)									
Parameter	Symbol	SGP1R	SGP2R	SGP3R	SGP4R	SGP5R	SGP6R	SGP7R	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	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	SGP1R	SGP2R	SGP3R	SGP4R	SGP5R	SGP6R	SGP7R	Unit
Maximum instantaneous forward voltage	1 A	V _F	1.3							Volts
Maximum DC reverse current	TA=25°C TA=125°C	I _R	5 250							μA
Typical reverse recovery time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	150				250	500		nS
Typical junction capacitance	4.0 V, 1 MHz	C _J	5							pF
Typical thermal resistance ¹⁾	junction to mount	R _{θJM}	60							°C/W

Note:1), The thermal resistance from junction to mount, mounted on P.C.B with 5x5mm copper pads, 2 OZ, FR4 PCB



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Ratings and Characteristics Curves (TA = 25°C unless otherwise noted)

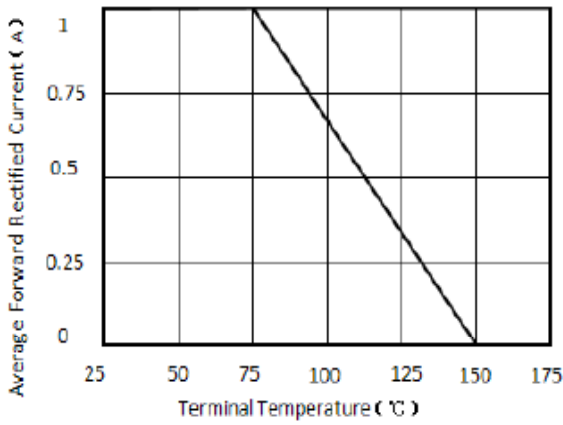


Figure 1. Forward Current Derating Curve

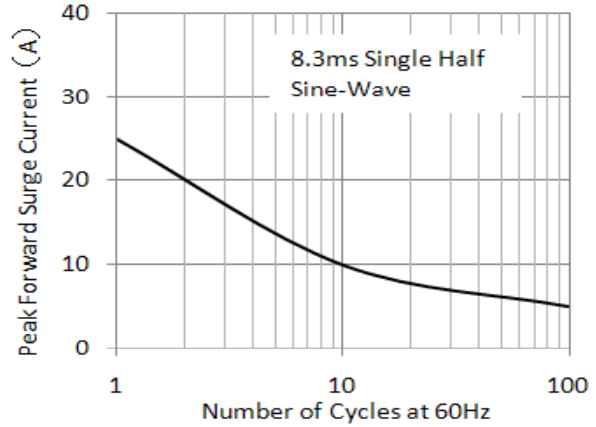


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

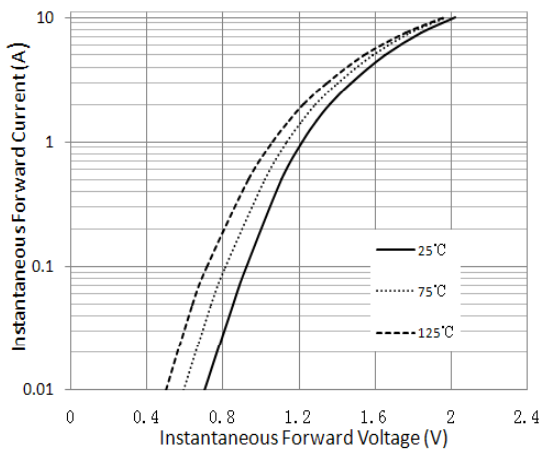


Figure 3. Typical Instantaneous Forward Characteristics

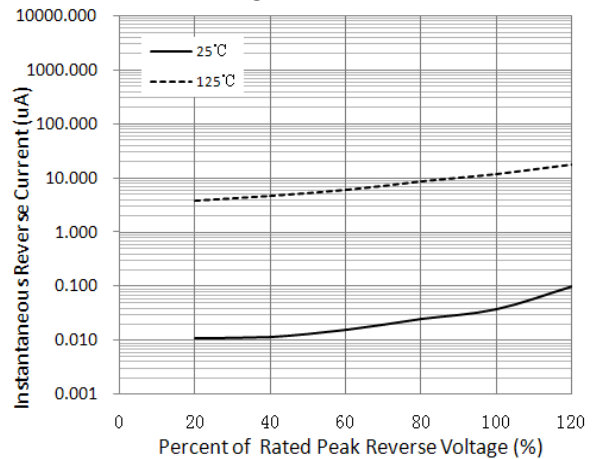


Figure 4. Typical Reverse Characteristics

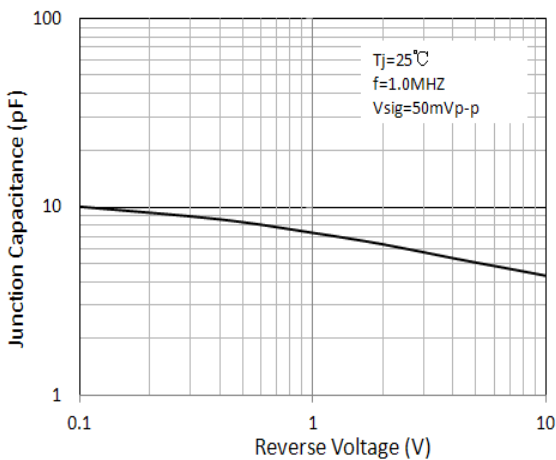
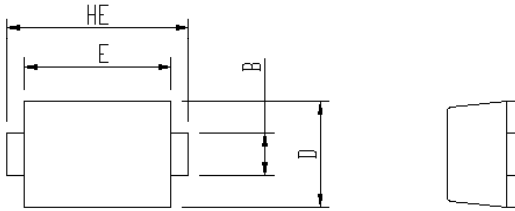
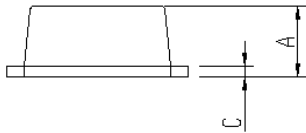


Figure 5. Typical Junction Capacitance

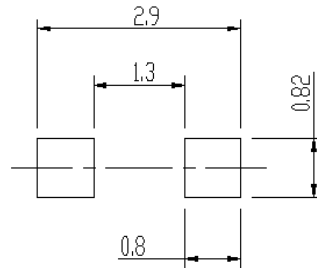
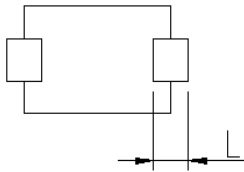
Package Outline Dimensions



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

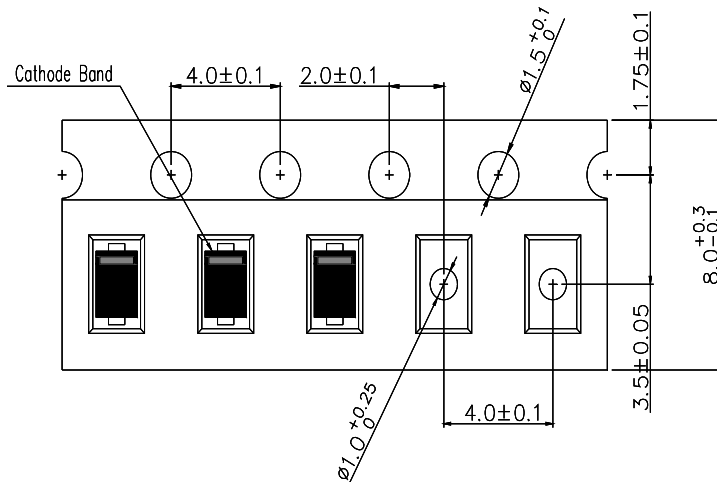


Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification





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