

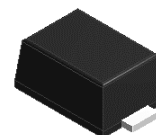
1A,50-1000V Standard Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- 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 of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)									
Parameter	Symbol	SGP1A	SGP2A	SGP3A	SGP4A	SGP5A	SGP6A	SGP7A	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	25							A
Operating junction temperature range	T _J	-55 to +150							°C
Storage temperature range	T _{STG}	-55 to +150							°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	120	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	40	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	40	°C /W

Electrical Specifications (T _A =25°C unless otherwise noted)										
Parameter	Symbol	Test Conditions	SGP1A	SGP2A	SGP3A	SGP4A	SGP5A	SGP6A	SGP7A	Unit
Forward Drop Voltage	V _F	I _F =1A	1.1							V
Reverse leakage current @V _R	I _R	T _J =25°C	5							uA
		T _J =125°C	50							
Typical junction capacitance	C _J	4.0 V 1 MHz	5							pF
Typical reverse recovery time	trr	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	1.8							uS

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)

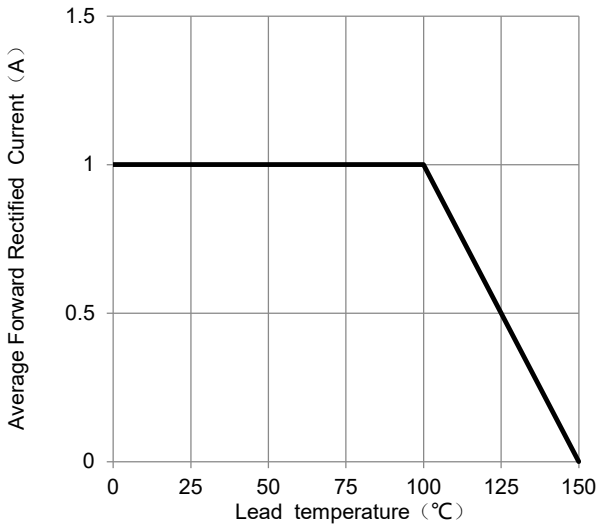


Fig.1 - Forward Current Derating Curve

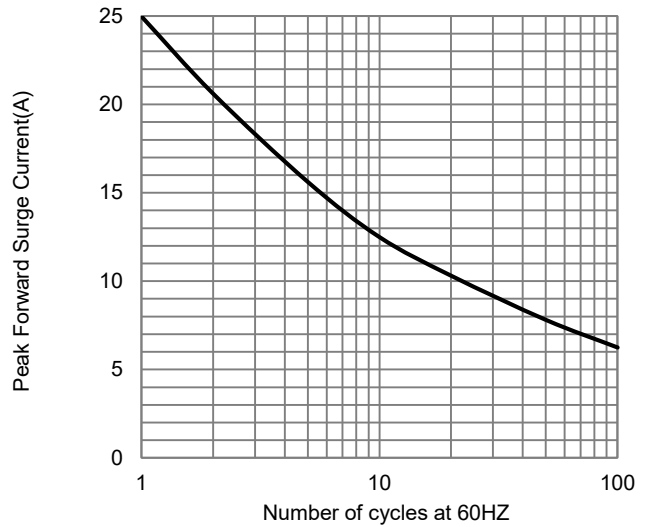


Fig.2 - Maximum Non-Repetitive Surge Current

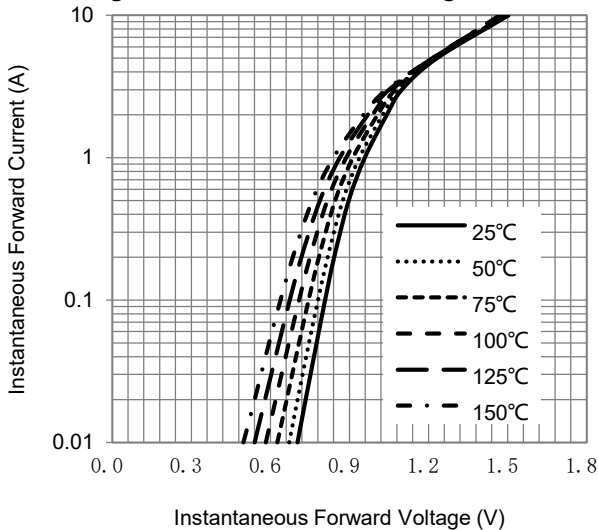


Fig.3 - Typical Forward Voltage Characteristics

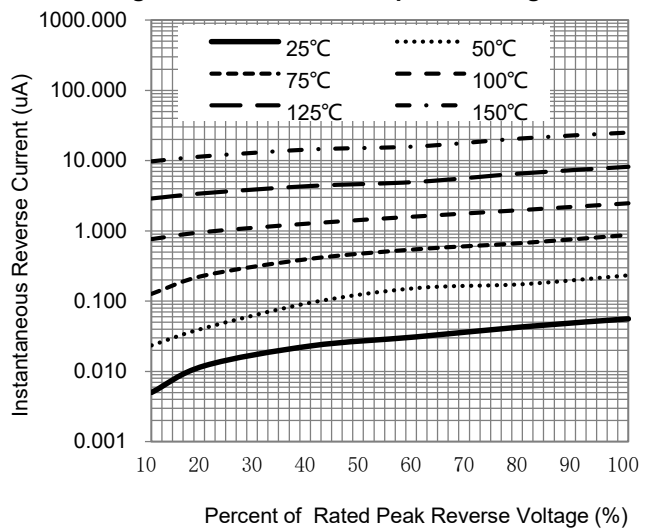


Fig.4 - Typical Reverse Current Characteristics

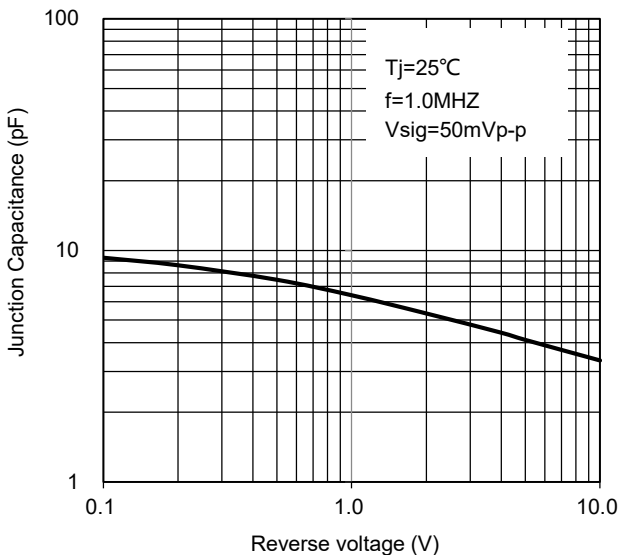
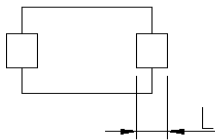
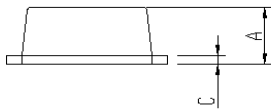
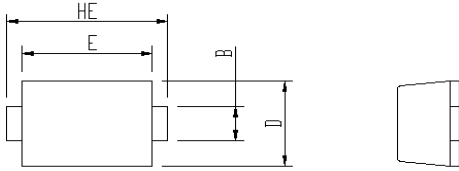


Fig.5 - Typical Junction Capacitance

Package Outline Dimensions

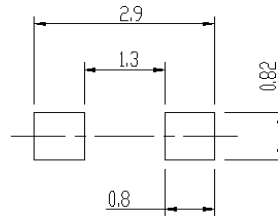
in inches (millimeters)

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	2023.08.01	Modify document format
Rev.C	2023.10.16	Modify document format

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