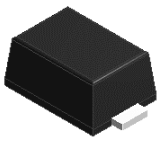
1A,20-40V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds

RoHS COMPLIANT



eSGP(SOD-323F)

Applications

For use in low voltage, high frequency inverters, free-wheeling and polarity protection application.

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	SGP0120SL1	SGP0130SL1	SGP0140SL1	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	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	I_{FSM}	9			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_{thJA}	120	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	40	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	40	°C /W

Electrical Specifications(T_A=25°C unless otherwise noted)						
Parameter	**Symbol**	**Test Conditions**	**SGP0120SL1**	**SGP0130SL1**	**SGP0140SL1**	**Unit**
Maximum forward drop voltage	V_F	I_F=1A	0.50			V
Maximum reverse leakage current @V_R	I_R	T_J =25℃	200			uA
Typical junction capacitance	C_J	V_R=4.0V, f=1MHZ	61			pF

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)

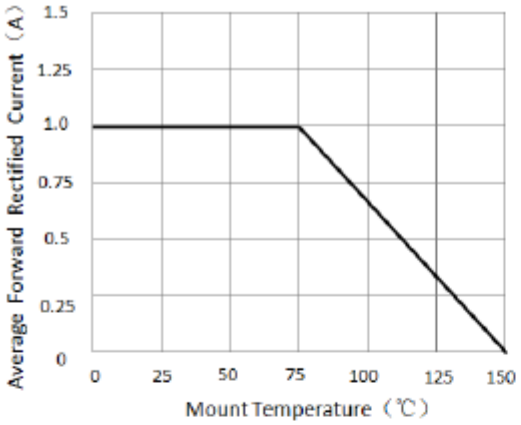


Figure 1.Forward Current Derating Curve

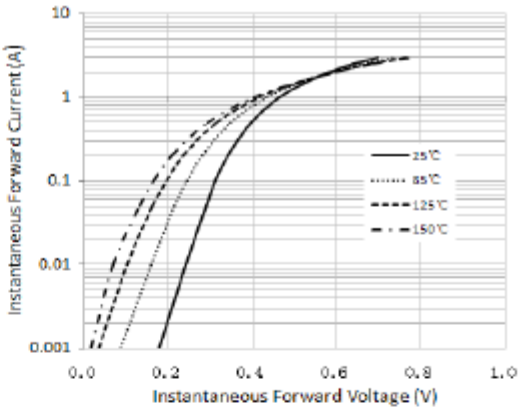


Figure 2. Typical Instantaneous Forward Characteristics

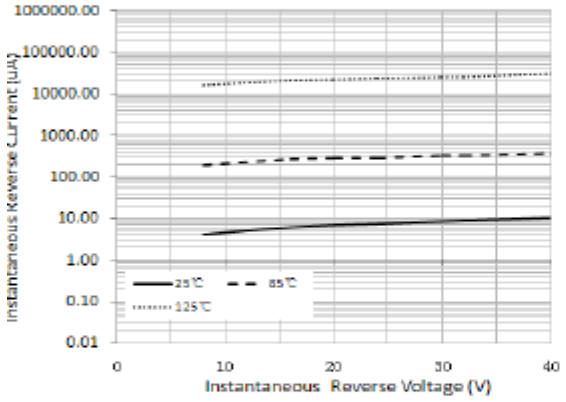


Figure 3. Typical Reverse Characteristics

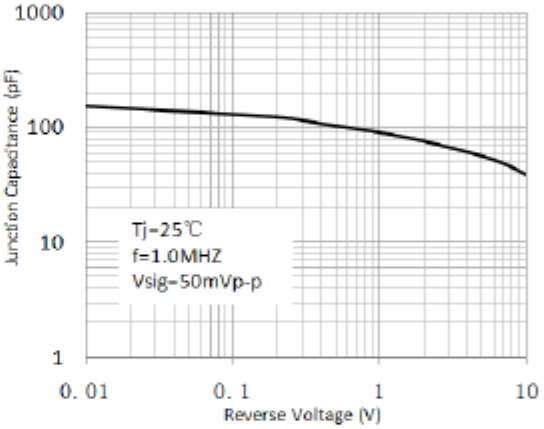


Figure 4. Typical Junction Capacitance

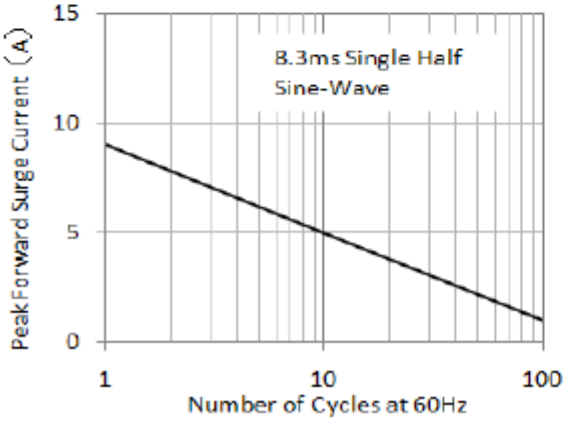
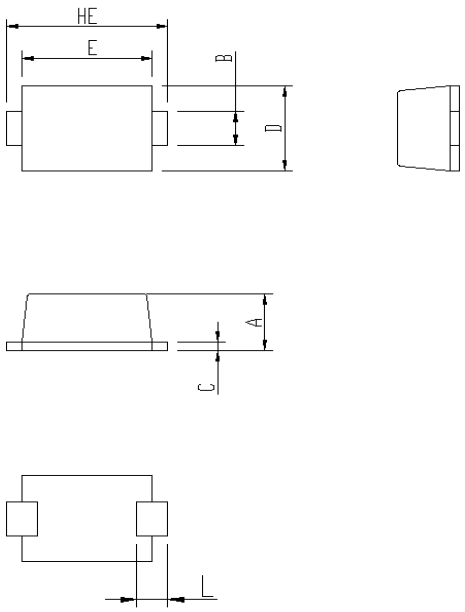


Figure 5.Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

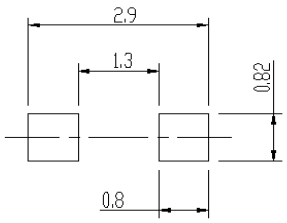
in inches (millimeters)

eSGP (SOD-323F)



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



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