



SGP0140SL thru SGP0160SL

Surface Mount Schottky Rectifier
Reverse Voltage 40~60V Forward Current 1A

Features

- Low VF Schottky barrier diodes
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- 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



Typical Applications

For use of fast swiching in RF module, lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)				
Parameter	Symbol	SGP0140SL	SGP0160SL	Unit
Maximum repetitive peak reverse voltage	VRRM	40	60	V
Maximum RMS voltage	VRMS	28	42	V
Maximum DC blocking voltage	VDC	40	60	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	30		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	SGP0140SL	SGP0160SL	Unit
Maximum instantaneous forward voltage	1 A	V _F	0.50	0.70	Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	I _R	0.2		mA
	TA=125°C		30		
Typical junction capacitance	4.0 V, 1 MHz	C _J	45		pF
Typical thermal resistance	junction to mount	R _{θJM}	55		°C/W

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

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

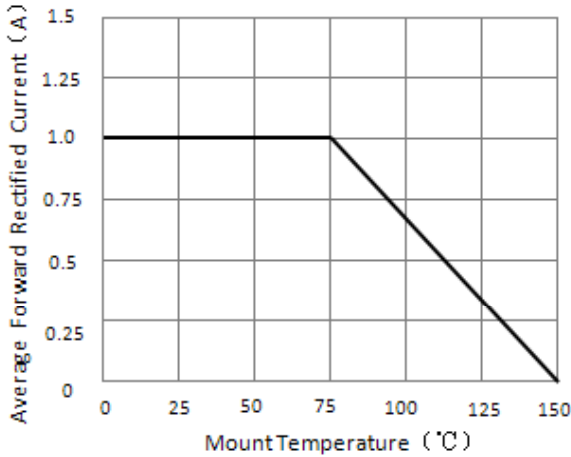


Figure 1. Forward Current Derating Curve

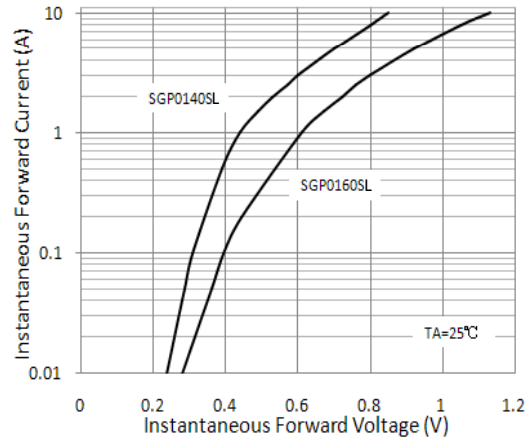


Figure 2. Typical Instantaneous Forward Characteristics

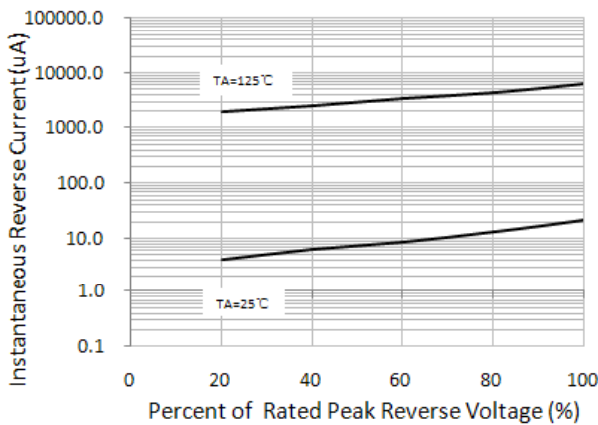


Figure 3. Typical Reverse Characteristics

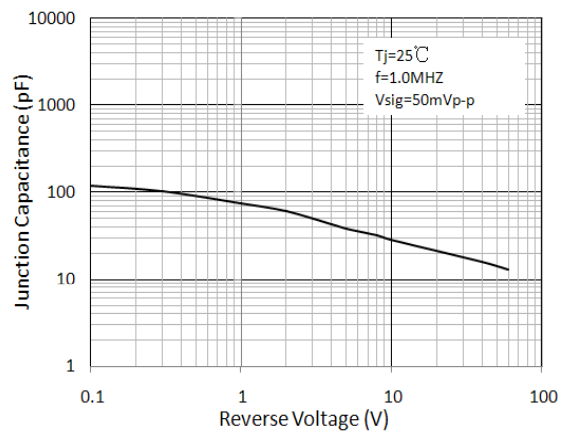


Figure 4. Typical Junction Capacitance

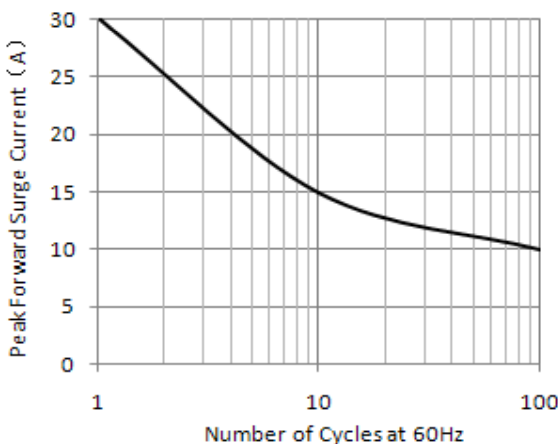


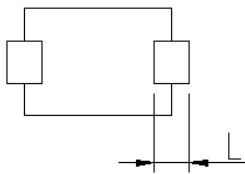
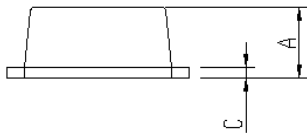
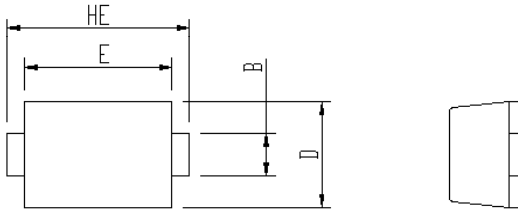
Figure 5. Maximum Non-Repetitive Peak Forward Surge Current



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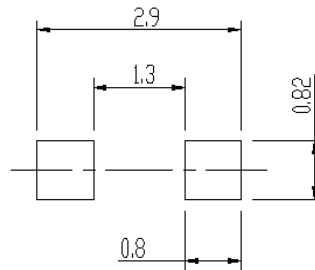
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Package Outline Dimensions



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

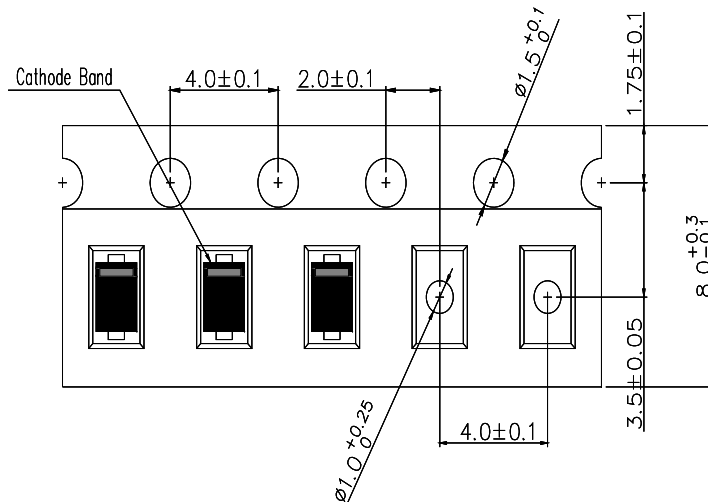


Packing Information

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





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