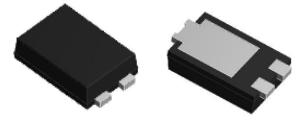
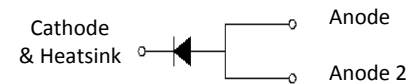


## Features

- Schottky barrier diodes
- Low forward voltage drop
- Solder dip 260 °C, 10 s
- Low profile - typical height of 1.1 mm
- 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



eSGC (TO-277)



## Typical Applications

For low voltage high frequency inverters, DC/DC converters and polarity protection application.

Maximum Ratings (TA = 25 °C unless otherwise noted)			
Parameter	Symbol	SGC1045SA	Unit
Maximum repetitive peak reverse	VRRM	45	V
Maximum RMS voltage	VRMS	31.5	V
Maximum DC blocking voltage	VDC	45	V
Maximum average forward rectified current	IF(AV) <sup>1</sup>	10.0	A
	IF(AV) <sup>2</sup>	5.0	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	175	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	SGC1045SA	Unit
Maximum Instantaneous forward voltage	IF=10A	TA=25°C	VF	0.55	Volts
Maximum DC Instantaneous reverse current	Rated VR	TA=25°C	IR	0.35	mA
Typical junction capacitance	4.0 V, 1 MHz		CJ	0.85	nF
Typical thermal resistance <sup>1)</sup>	junction to ambient		RθJA	90	°C/W
	junction to mount		RθJM	35	

Note:1),The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 30x30mm copper pads,2 OZ,FR4 PCB

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

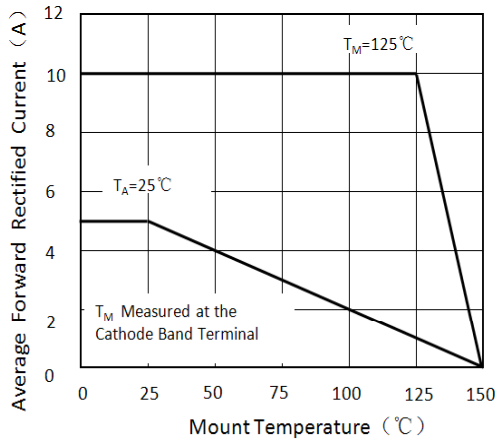


Figure 1. Forward Current Derating Curve

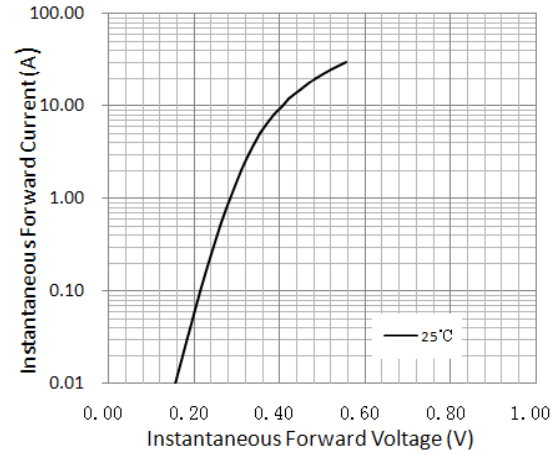


Figure 2. Typical Instantaneous Forward Characteristics

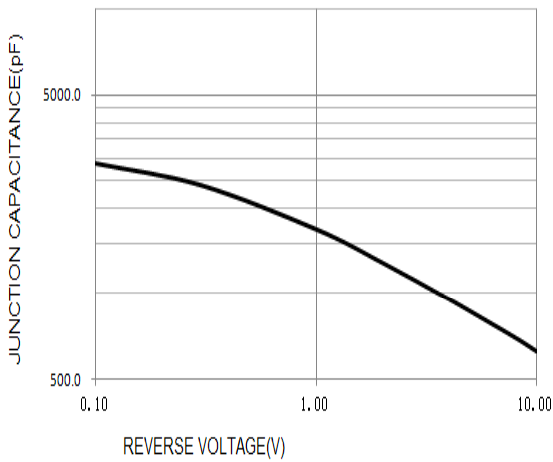


Figure 3. Typical Junction Capacitance

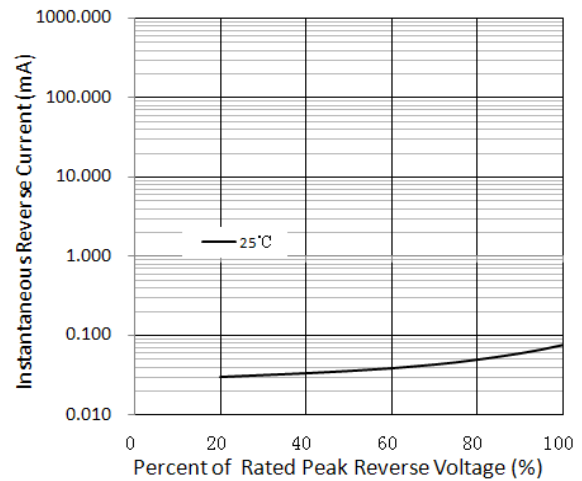


Figure 4. Typical Reverse Characteristics

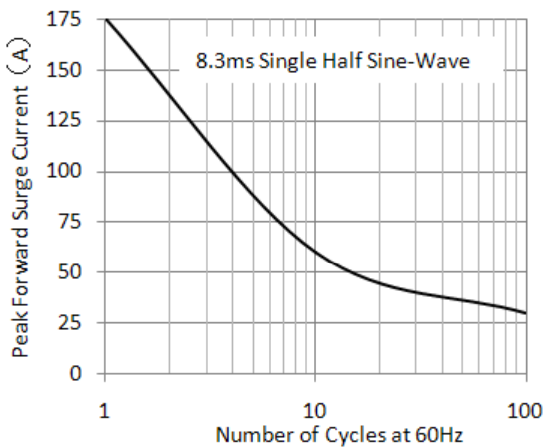
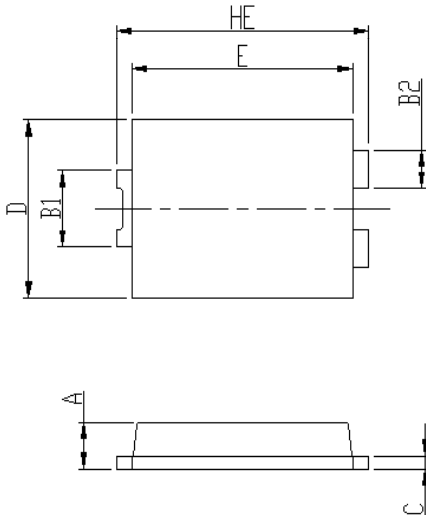


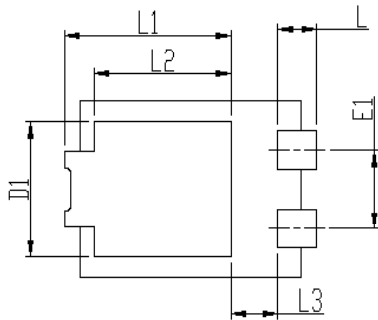
Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

## Package Outline Dimensions

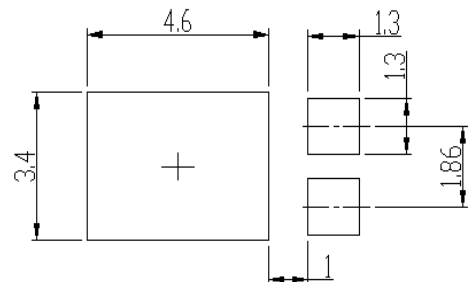
in inches (millimeters)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	



Soldering footprint

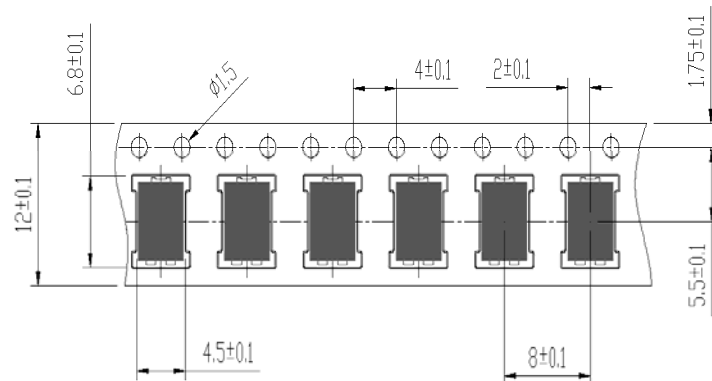


## Packing Information

### Packing quantities:

5000 pcs/Reel, 12mm Tape, 13" Reel

### Tape & Reel Specification





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