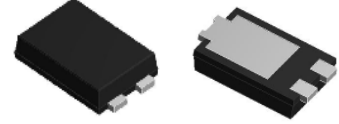
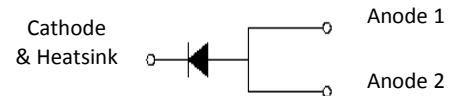


## Features

- Heatsink design
- Schottky barrier diodes
- Low forward voltage drop
- Low leakage current
- Solder dip 260 °C, 10 s
- Moisture sensitivity: level 1, per J-STD-020
- Low profile - typical height of 1.1 mm
- 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	SGC2045S	Unit
Maximum repetitive peak reverse voltage	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>	8.0	A
	IF(AV) <sup>2)</sup>	20.0	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	300	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	TYP.	MAX.	Unit
Instantaneous forward voltage	IF=2A	TA=25°C	VF	0.31	0.32	Volts
				IF=20A	0.46	
	IF=2A	TA=85°C		0.25	0.26	
				IF=20A	0.45	
	IF=2A	TA=125°C		0.21	0.22	
				IF=20A	0.44	
Instantaneous reverse current at rated DC blocking voltage	Rated VR	TA=25°C	IR	100.0	125.0	uA
		TA=85°C		2.9	5.0	mA
		TA=125°C		22.0	30.0	
Typical junction capacitance	4.0 V, 1 MHz		CJ	950		pF
Typical thermal resistance	junction to ambient		RθJA <sup>1)</sup>	72		°C/W
	junction to lead		RθJL <sup>2)</sup>	1		°C/W

### Notes

1)Thermal resistance RθJA is junction to ambient,mounted on P.C.B with 30\*30mm copper pad area

2)Thermal resistance RθJL is junction to lead,mounted on al P.C.B

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

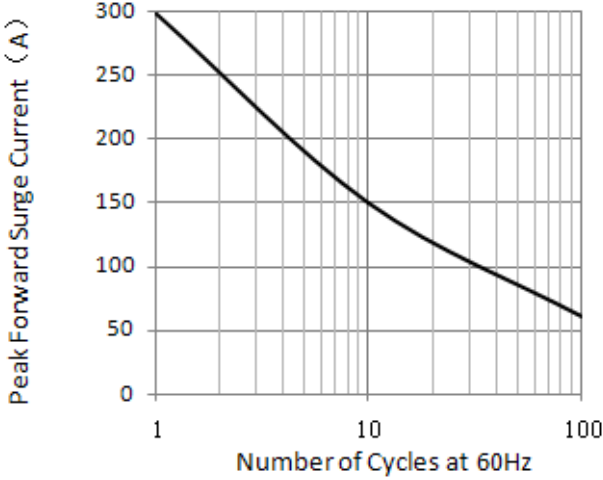


Figure 1. Maximum Non-Repetitive Peak Forward Surge Current

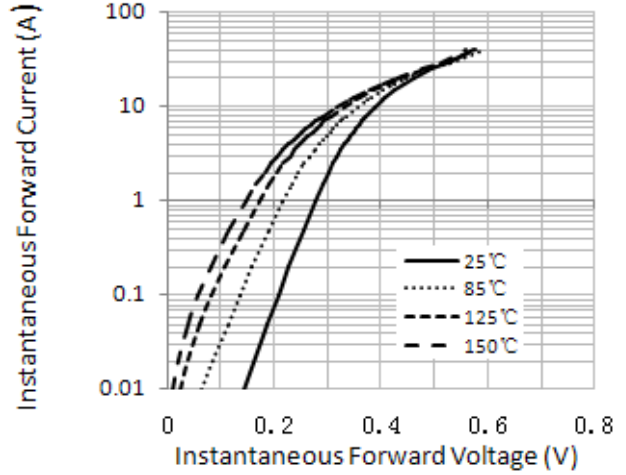


Figure 2. Typical Instantaneous Forward Characteristics

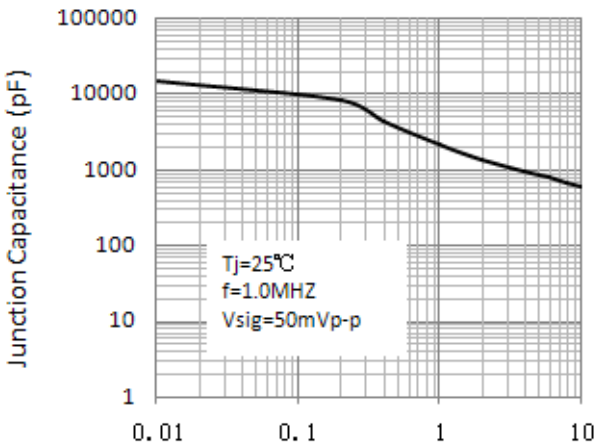


Figure 3. Typical Junction Capacitance

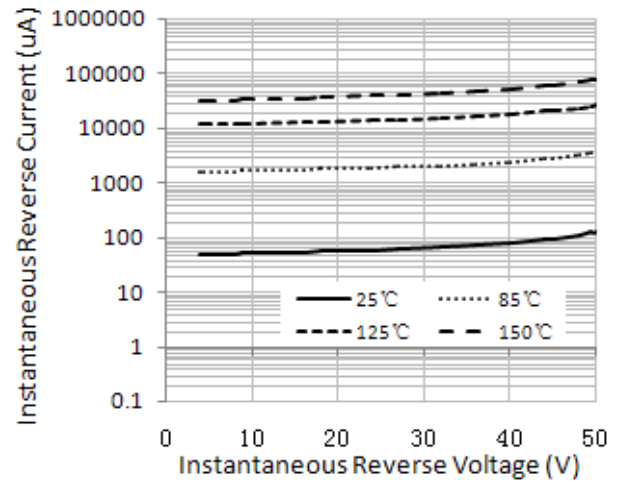


Figure 4. Typical Reverse Characteristics

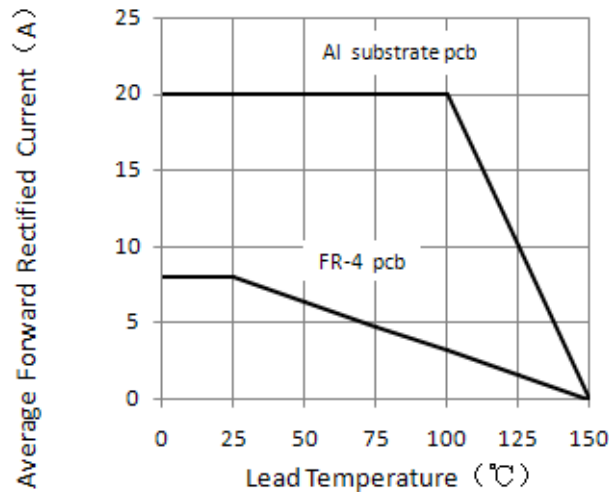
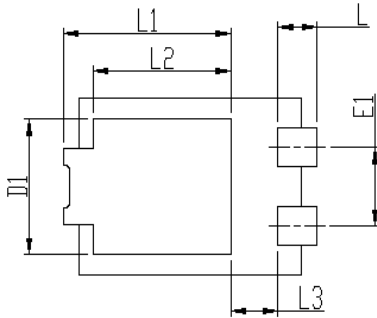
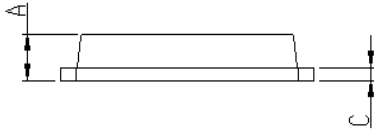
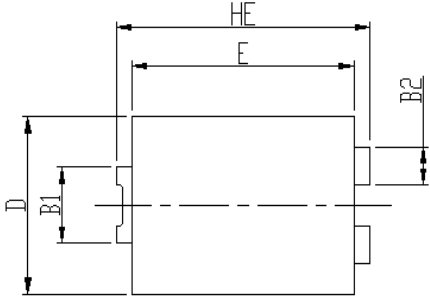


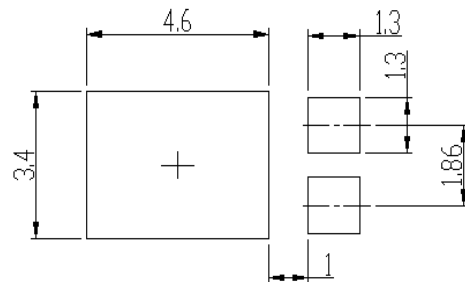
Figure 5. Forward Current Derating Curve

## Package Outline Dimensions



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

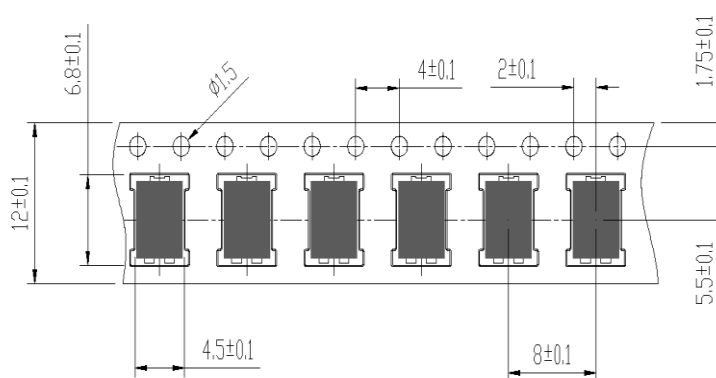


## Packing Information

### Packing quantities:

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

### Tape & Reel Specification





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