

- Schottky barrier diodes
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile - typical height of 1.1 mm
- Heatsink design
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



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	SGC051BS	Unit
Maximum repetitive peak reverse voltage	VRRM	100	V
Maximum RMS voltage	VRMS	70	V
Maximum DC blocking voltage	VDC	100	V
Maximum average forward rectified current	IF(AV)	5.0	A
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	TYP.	MAX.	Unit	
Maximum instantaneous forward voltage	IF=1A	TA=25°C	VF	0.51	0.55	Volts	
				IF=2A	0.58		0.65
				IF=5A	0.70		0.75
	IF=1A	TA=85°C		0.45	0.50		
				IF=2A	0.53		0.60
				IF=5A	0.62		0.68
	IF=1A	TA=125°C		0.40	0.45		
				IF=2A	0.47		0.55
				IF=5A	0.56		0.62
Maximum DC reverse current at rated DC blocking voltage	Rated VR	TA=25°C	IR	0.05	0.1	mA	
		TA=85°C		0.2	1		
		TA=125°C		1	20		
Typical junction capacitance	4.0 V, 1 MHz		CJ	265		pF	
Typical thermal resistance	junction to lead		RθJL ¹⁾	10		°C/W	

Note1) Thermal resistance R_{θJL} is junction to lead, mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

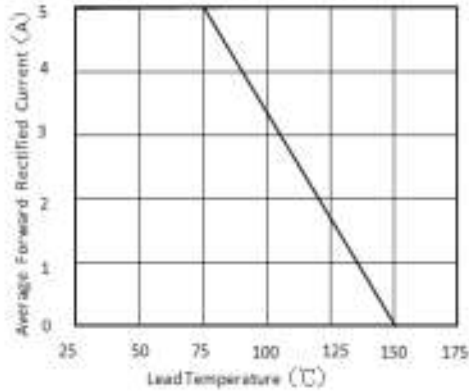


Figure 1. Forward Current Derating Curve

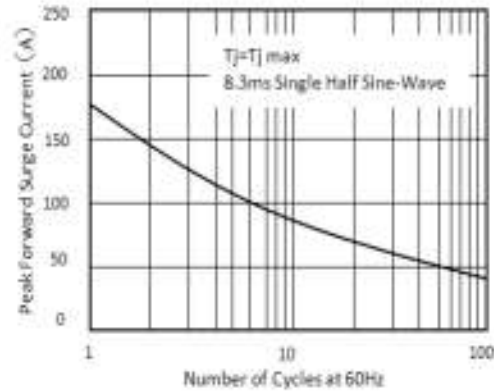


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

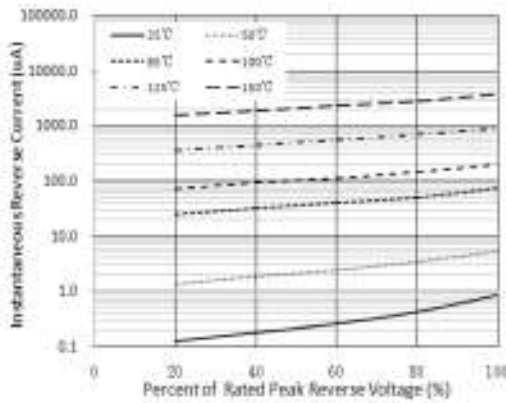


Figure 3. Typical Reverse Characteristics

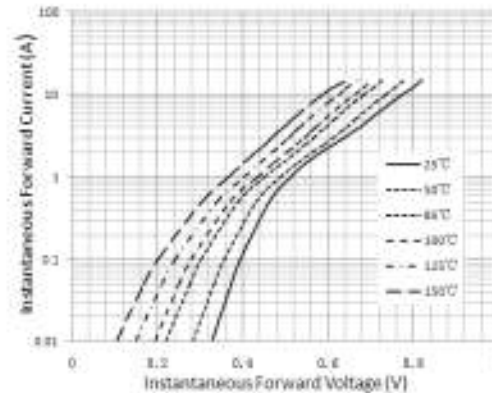


Figure 4. Typical Instantaneous Forward Characteristics

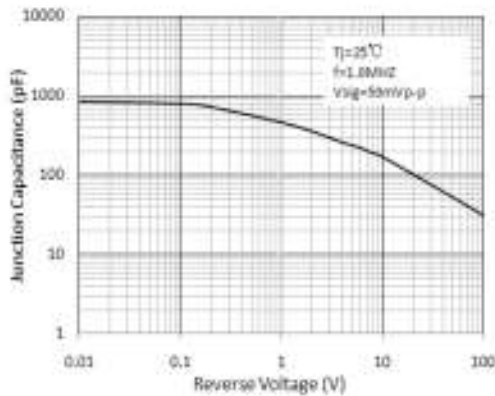
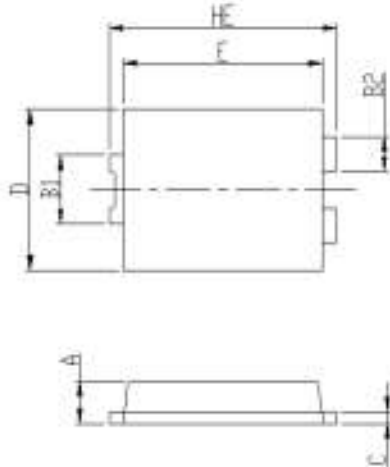


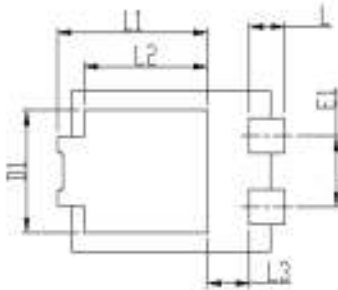
Figure 5. Typical Junction Capacitance

Package Outline Dimensions

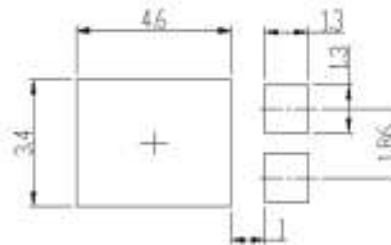
in inches (millimeters)



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

