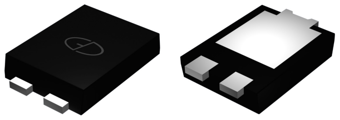
GOOD-ARK
SEMICONDUCTOR

SGC101BSA

Surface Mount Schottky Rectifier
Reverse Voltage 100V   Forward Current 10A

Features

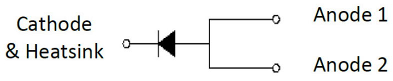
- Low profile - typical height 1.1 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



Package:
eSGC (TO-277)

Applications

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



Schematic Diagram

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$ 1)	5.0	A
	$I_{F(AV)}$ 2)	10.0	
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load)	I_{FSM}	220	A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage	I_F=1A	T_A=25℃	V_F	0.38	-	V
	I_F=2A			0.41	-	
	I_F=10A			0.54	0.65	
	I_F=10A	T_A=125℃		0.50	0.60	
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R=80V	T_A=25℃	I_R	14.9	-	uA
		T_A=125℃		9.6	-	mA
	V_R=100V	T_A=25℃	I_R	29.5	250	uA
		T_A=125℃		15.2	50	mA
Typ. Junction Capacitance	4.0 V, 1 MHz		C_J	290		pF
Typ. Thermal Resistance	Juntion to Ambient		$R_{\theta JA}$ 1)	75		℃/W
	Juntion to Mount		$R_{\theta JM}$ 2)	1		℃/W

Notes 1)Thermal resistance $R_{\theta JA}$ is junction to ambient. Free air,mounted on P.C.B with recommended copper pad area,2 OZ,FR4

2)Thermal resistance $R_{\theta JM}$ is junction to mount.Mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves (T$_A$ = 25° C unlessotherwise noted)

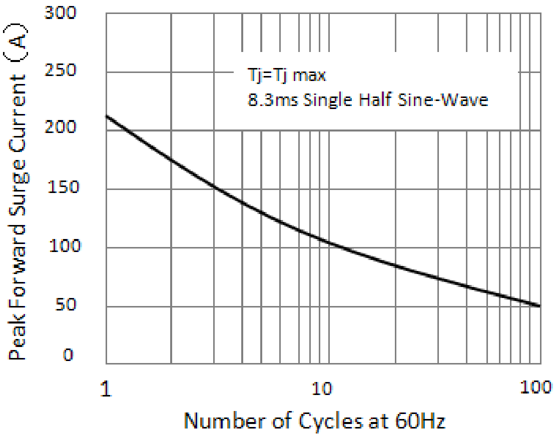


Figure 1.Maximum Non-Repetitive Peak Forward Surge Current

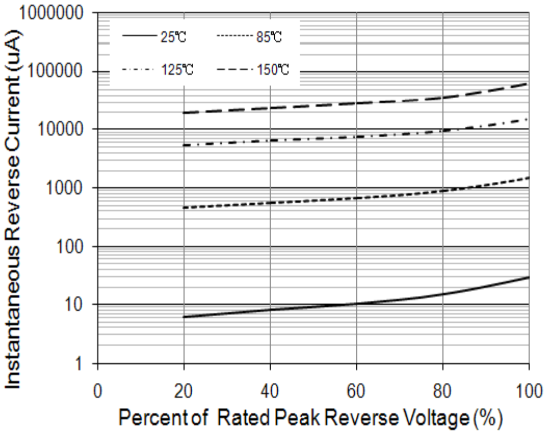


Figure 2. Typical Reverse Characteristics

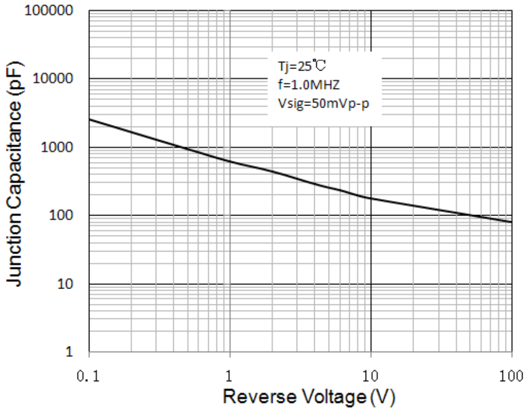


Figure 3. Typical Junction Capacitance

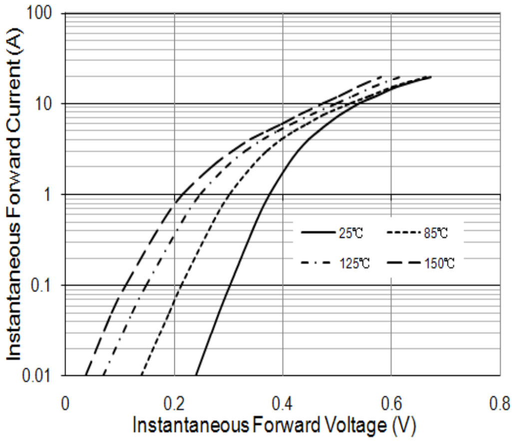


Figure 4. Typical Instantaneous Forward Characteristics

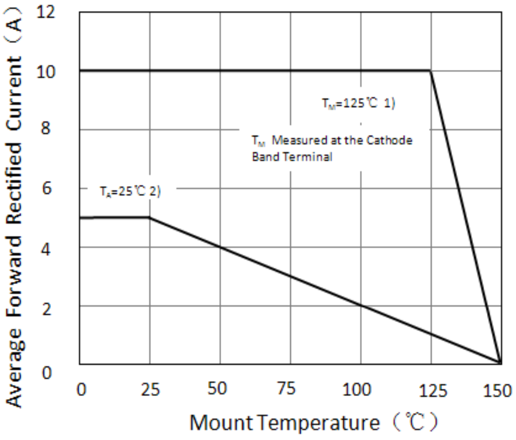
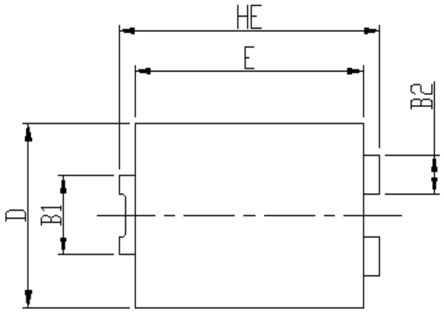


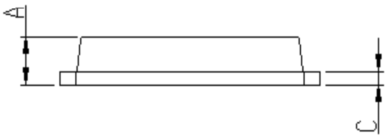
Figure 5.Forward Current Derating Curve

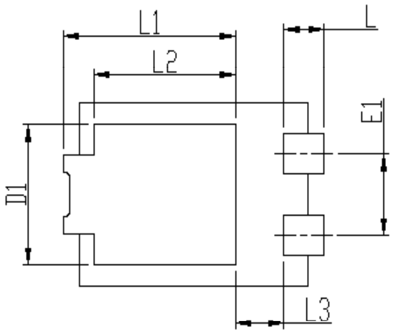
Notes
1) Mounted on P.C.B with 30*30mm copper pad area
2) Fre air, Mounted on recommended copper pad area FR4 PCB(R$_{\theta JA}$=76℃/W)

Package Outline Dimensions

eSGC (TO-277)

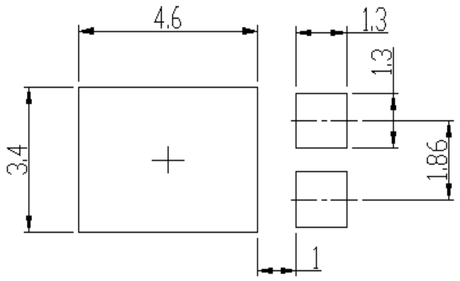






DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3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

Soldering footprint



Packing Information

Packing quantities

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

Tape & Reel Specification