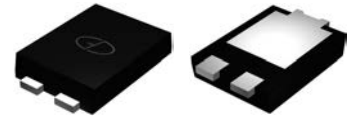
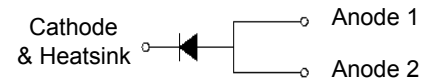


Features

- 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)



Schematic Diagram

Applications

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

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	V
Maximum RMS Voltage	V_{RMS}	35	V
Maximum DC Blocking Voltage	V_{DC}	50	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	15	A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed On Rated Load)	I_{FSM}	300	A
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Typ.	Max.	Unit						
Maximum Instantaneous Forward Voltage	$I_F=1\text{A}$	V_F			V	$T_A=25^\circ\text{C}$	0.29	0.32			
							$I_F=2\text{A}$	0.32	0.35		
							$I_F=15\text{A}$	0.48	0.55		
	$I_F=1\text{A}$						$T_A=85^\circ\text{C}$	0.22	0.27		
								$I_F=2\text{A}$	0.25	0.30	
								$I_F=15\text{A}$	0.46	0.50	
	$I_F=1\text{A}$							$T_A=125^\circ\text{C}$	0.18	0.23	
									$I_F=2\text{A}$	0.22	0.27
									$I_F=15\text{A}$	0.45	0.48
Maximum DC Reverse Current at Rated DC Blocking Voltage	Rated V_R	I_R			mA	$T_A=25^\circ\text{C}$			0.06	0.2	
									$T_A=85^\circ\text{C}$	2.5	10
									$T_A=125^\circ\text{C}$	20	50
Junction Capacitance	4.0V, 1MHz	C_J	0.95		nF						
Typical Thermal Resistance	Junction to Ambient	$R_{\theta JA}$	80		$^\circ\text{C/W}$						
	Junction to Case	$R_{\theta JC}$	15								
	Junction to Lead ¹	$R_{\theta JL}$	7								

Notes:

1. Thermal resistance $R_{\theta JL}$ is junction to lead, mounted on P.C.B with 30*30mm copper pad area

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

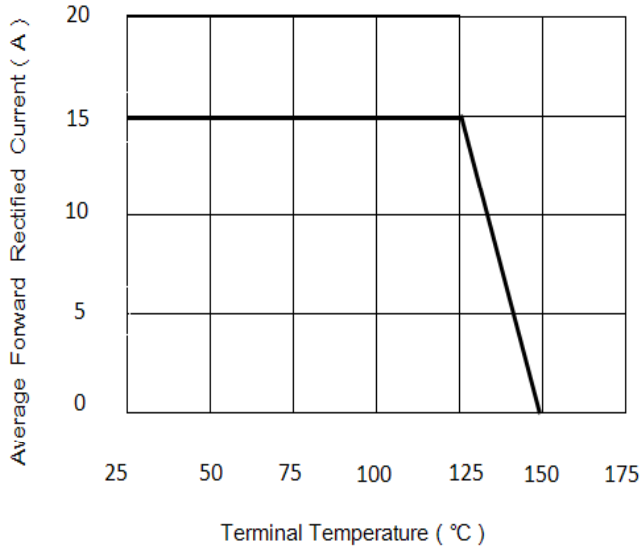


Figure 1. Forward Current Derating Curve

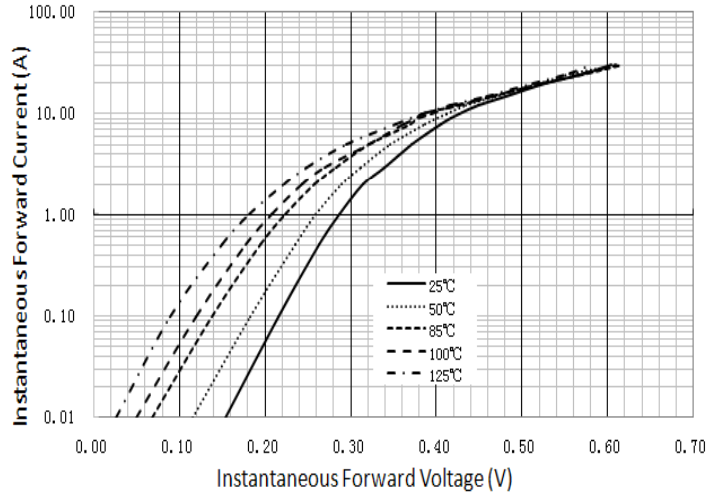


Figure 2. Typical Instantaneous Forward Characteristics

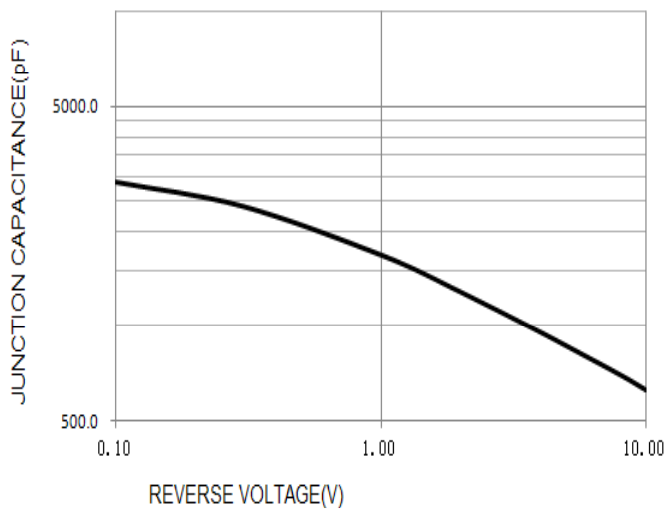


Figure 3. Typical Junction Capacitance

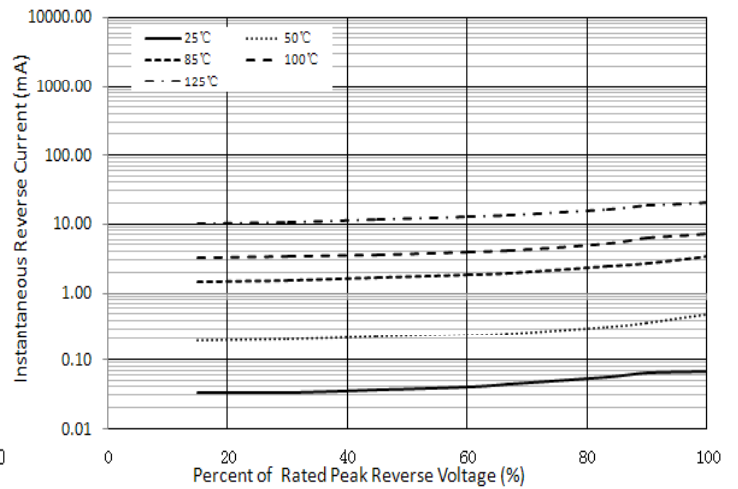


Figure 4. Typical Reverse Characteristics

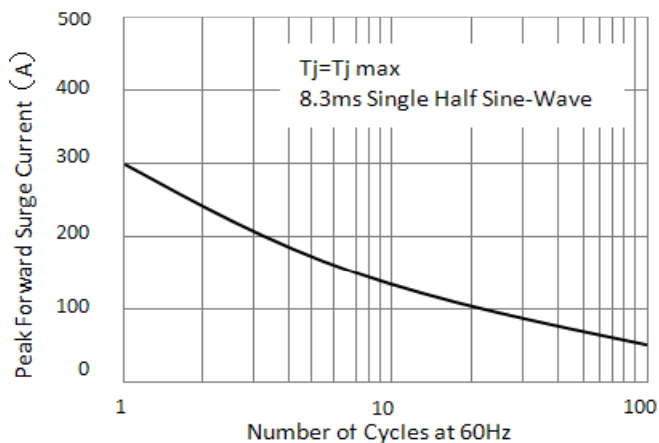
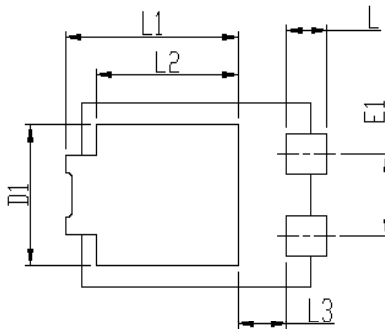
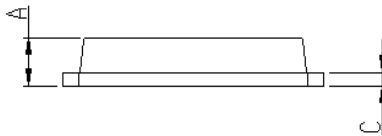
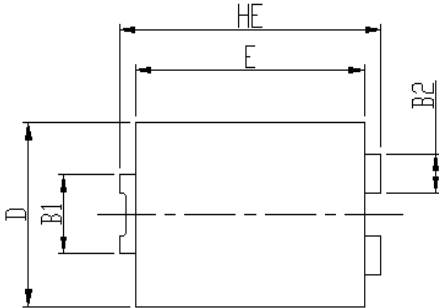


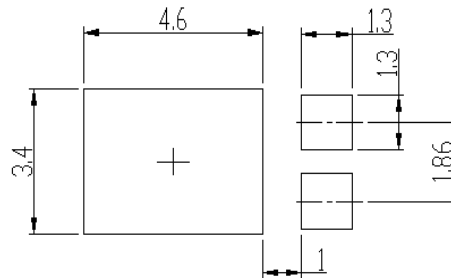
Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions 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



Order Information

Device	Package	Carrier	Quantity
GSGC1550S	eSGC (TO-277)	Tape & Reel	5,000pcs / Reel