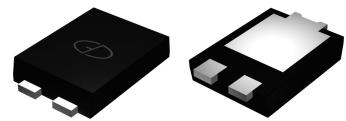
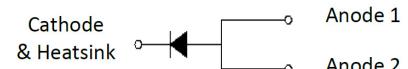


## Features

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

Parameter	Symbol	Value		Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100		V
Maximum RMS Voltage	V <sub>RMS</sub>	70		V
Maximum DC Blocking Voltage	V <sub>D</sub>	100		V
Maximum Average Forward Rectified Current	I <sub>F(AV)<sup>1)</sup></sub>	5.0		A
	I <sub>F(AV)<sup>2)</sup></sub>	12.0		
Peak Forward Surge Current (8.3ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	240		A
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150		°C

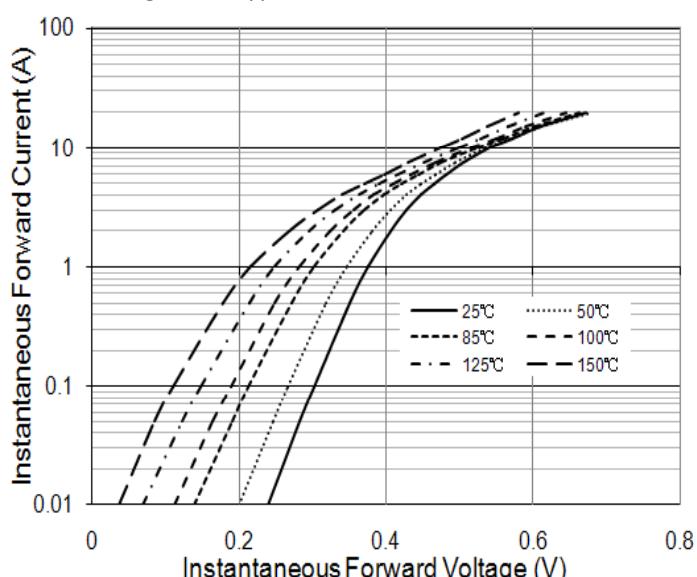
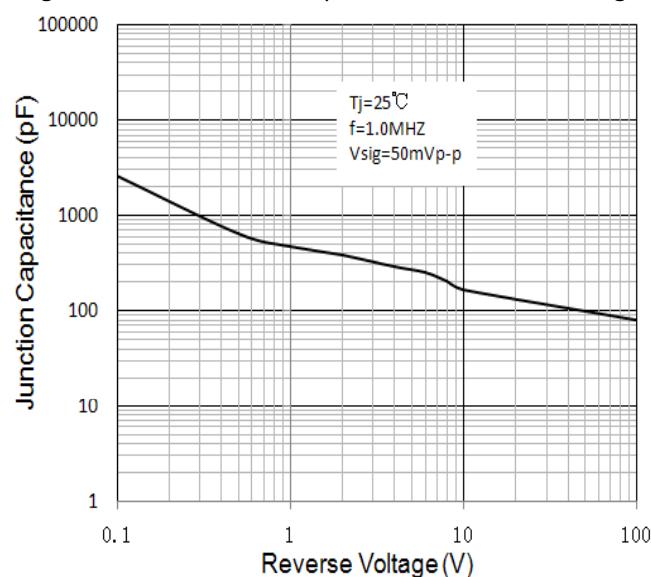
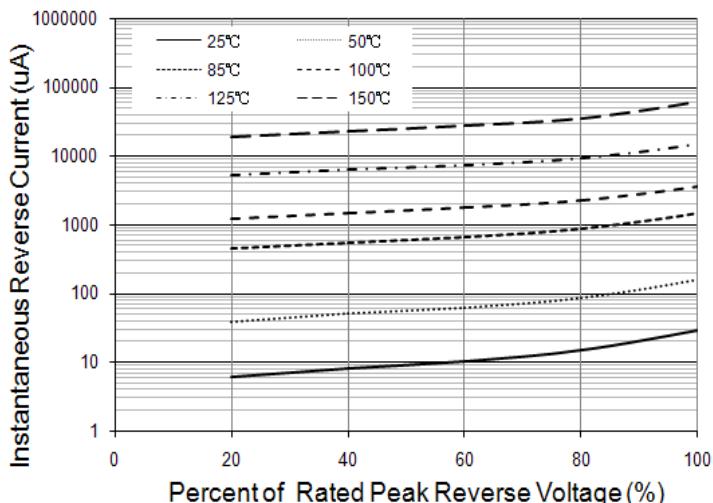
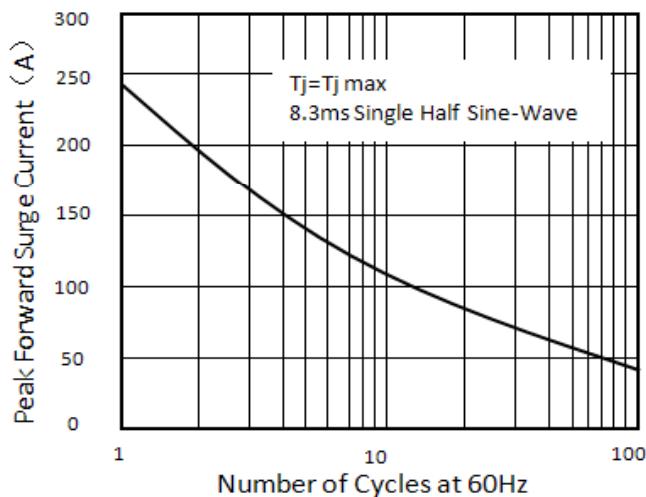
## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit	
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =5A	$T_A=25^\circ\text{C}$	V <sub>F</sub>	0.47	-	V	
	I <sub>F</sub> =12A			0.57	0.70		
	I <sub>F</sub> =5A	$T_A=125^\circ\text{C}$		0.39	-		
	I <sub>F</sub> =12A			0.53	0.65		
Maximum DC Reverse Current at Rated DC Blocking Voltage	V <sub>R</sub> =80V	$T_A=25^\circ\text{C}$	I <sub>R</sub>	14.9	-	uA	
		$T_A=125^\circ\text{C}$		9.6	-	mA	
	V <sub>R</sub> =100V	$T_A=25^\circ\text{C}$	I <sub>R</sub>	29.5	250	uA	
		$T_A=125^\circ\text{C}$		15.2	30	mA	
Typ. Junction Capacitance	4.0 V, 1 MHz		C <sub>J</sub>	290		pF	
Typ. Thermal Resistance	Junction to Ambient		R <sub>θJA</sub> <sup>1)</sup>	75		°C/W	
	Junction to Mount		R <sub>θJM</sub> <sup>2)</sup>	1		°C/W	

Notes 1)Thermal resistance R<sub>θJA</sub> is junction to ambient. Free air,mounted on P.C.B with recommended copper pad area,2 OZ,FR4

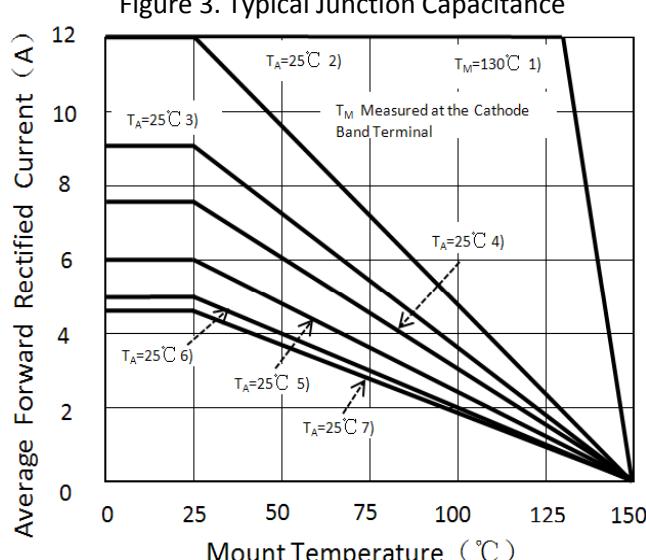
2)Thermal resistance R<sub>θJM</sub> is junction to mount.Mounted on P.C.B with 30\*30mm copper pad area

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

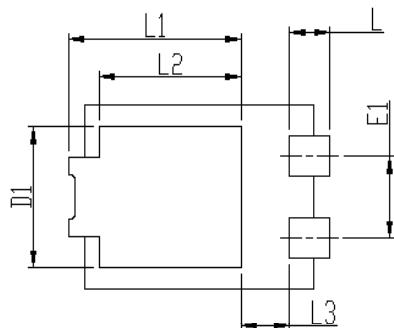
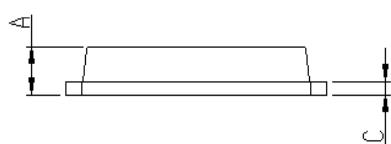
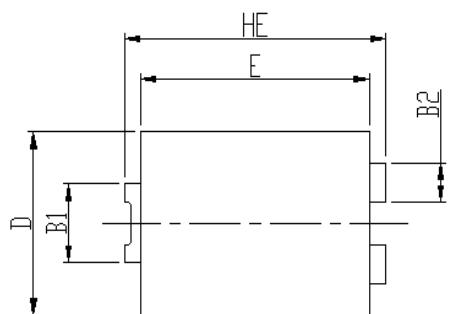


Notes

- 1) Mounted on P.C.B with 30\*30mm copper pad area
- 2) Mounted on P.C.B with 30\*30mm copper pad area ( $R_{\theta JA}=27^\circ C/W$ )
- 3) Mounted on P.C.B with 30\*30mm copper pad area ( $R_{\theta JA}=30^\circ C/W$ )
- 4) Mounted on P.C.B with 30\*30mm copper pad area ( $R_{\theta JA}=32^\circ C/W$ )
- 5) Mounted on P.C.B with 30\*30mm copper pad area ( $R_{\theta JA}=34^\circ C/W$ )
- 6) Fre air, Mounted on recommended copper pad area FR4 PCB ( $R_{\theta JA}=75^\circ C/W$ )
- 7) Fre air, Mounted on recommended copper pad area FR4 PCB ( $R_{\theta JA}=76^\circ C/W$ )



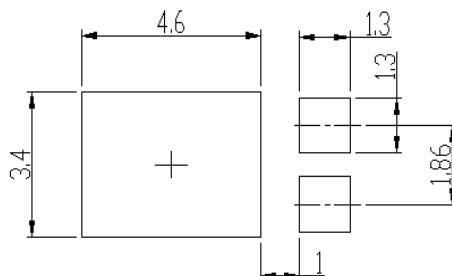
## Package Outline Dimensions



## 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

