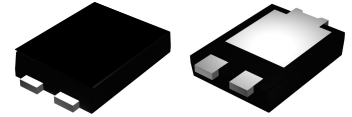
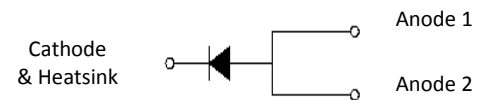


## Features

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



Package:  
eSGC (TO-277)



Schematic Diagram

## Applications

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

## Maximum Ratings (T<sub>A</sub> = 25°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>DC</sub>	100	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub> <sup>1)</sup>	8.0	A
	I <sub>F(AV)</sub> <sup>2)</sup>	15.0	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I <sub>FSM</sub>	250	A
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

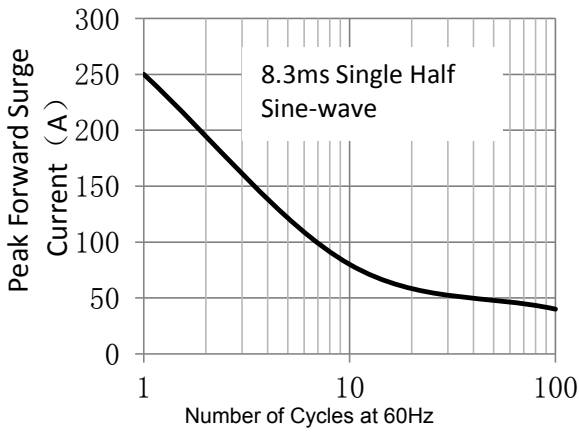
## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	Typ.	Max.	Unit	
Instantaneous Forward Voltage	I <sub>F</sub> =2A I <sub>F</sub> =5A I <sub>F</sub> =10A I <sub>F</sub> =15A	T <sub>A</sub> =25°C	V <sub>F</sub>	0.39	0.42	Volts
				0.44	0.47	
				0.51	-	
				0.57	0.65	
	I <sub>F</sub> =5A I <sub>F</sub> =15A	T <sub>A</sub> =125°C	0.35	-		
			0.52	0.6		
Reverse Current	V <sub>R</sub> =100V	T <sub>A</sub> =25°C	29	100	µA	
		T <sub>A</sub> =125°C	26	50	mA	
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	1.78		nF	
Typical Thermal Resistance	Junction to Ambient	R <sub>θJA</sub> <sup>1)</sup>	35		°C/W	
	Junction to Lead	R <sub>θJL</sub> <sup>2)</sup>	3.5		°C/W	

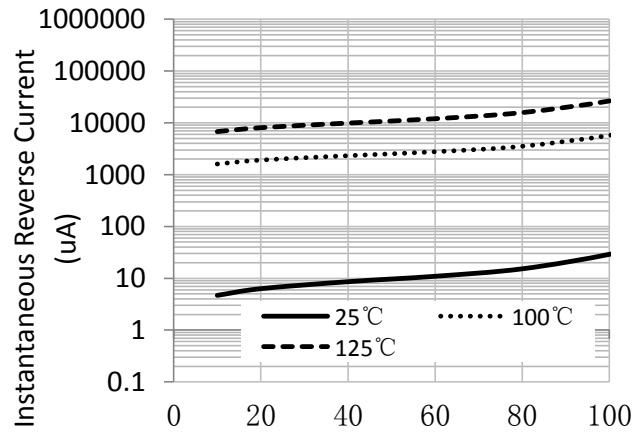
Notes, 1) Thermal resistance R<sub>θJA</sub> is junction to lead, mounted on P.C.B with 30\*30mm copper pad area

2) Thermal resistance R<sub>θJM</sub> is junction to lead, mounted on aluminum substrate P.C.B

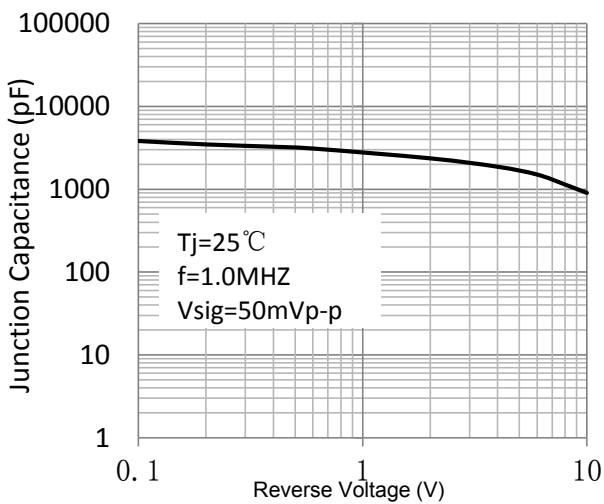
## Ratings and Characteristics Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)



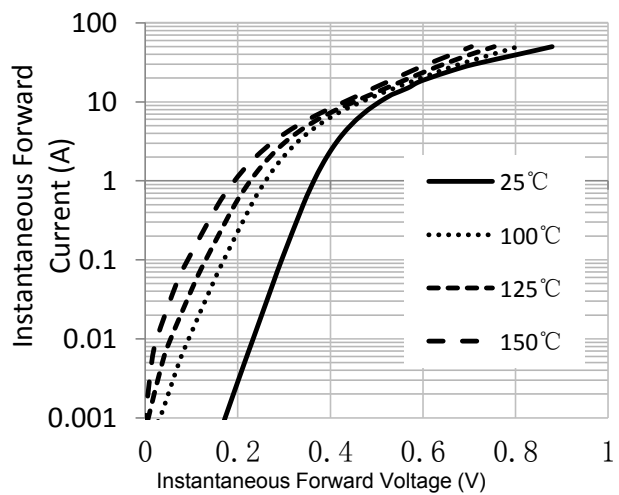
**Figure 1. Maximum Non-Repetitive Peak Forward Surge Current**



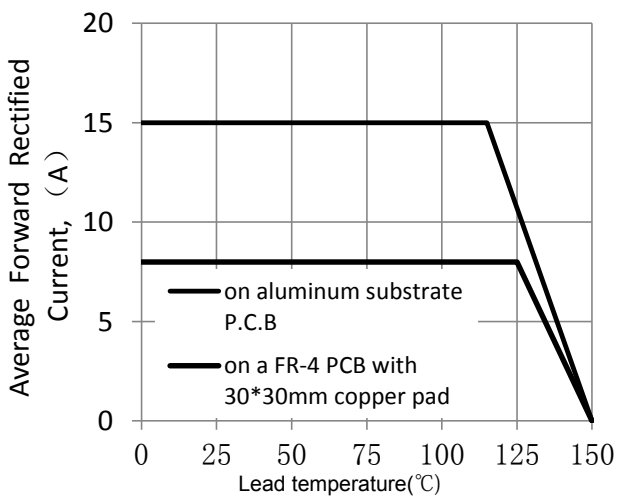
**Figure 2. Typical Reverse Characteristics**



**Figure 3. Typical Junction Capacitance**



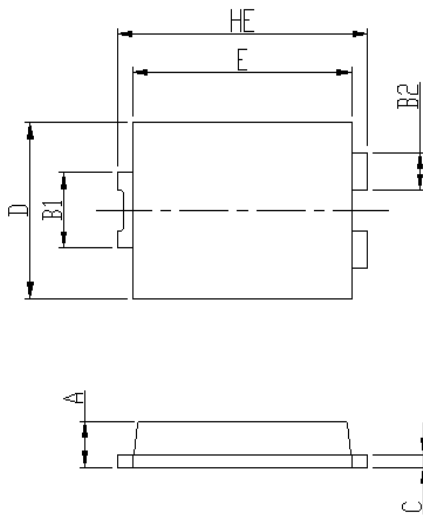
**Figure 4. Typical Instantaneous Forward Characteristics**



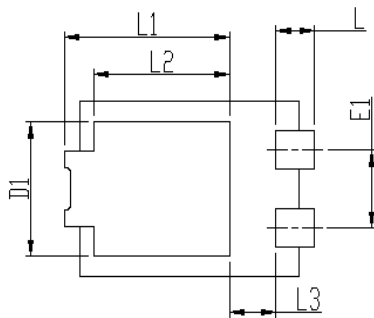
**Figure 5. Forward Current Derating Curve**

## Package Outline Dimensions

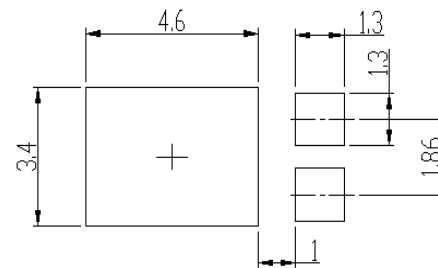
eSGC (TO-277)



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

