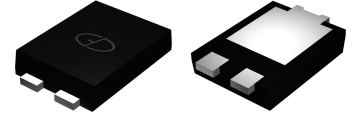


Features

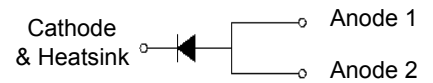
- Low profile - typical height 1.1 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



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_{RRM} | 60 | V |
| Maximum RMS Voltage | V_{RMS} | 42 | V |
| Maximum DC Blocking Voltage | V_{DC} | 60 | 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 and Storage Temperature Range | T_J, 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 | $I_F=1\text{A}$ | $T_A=25^\circ\text{C}$ | V_F | 0.29 | 0.32 | V |
| | $I_F=2\text{A}$ | | | 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 | $T_A=25^\circ\text{C}$ | I_R | 0.06 | 0.2 | mA |
| | | $T_A=85^\circ\text{C}$ | | 2.5 | 10 | |
| | | $T_A=125^\circ\text{C}$ | | 20 | 50 | |
| Junction Capacitance | 4.0 V, 1 MHz | | C_J | 950 | | pF |
| Typical Thermal Resistance | Juntion to Lead | | $R_{\theta JL}$ | 3 | | $^\circ\text{C}/\text{W}$ |

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

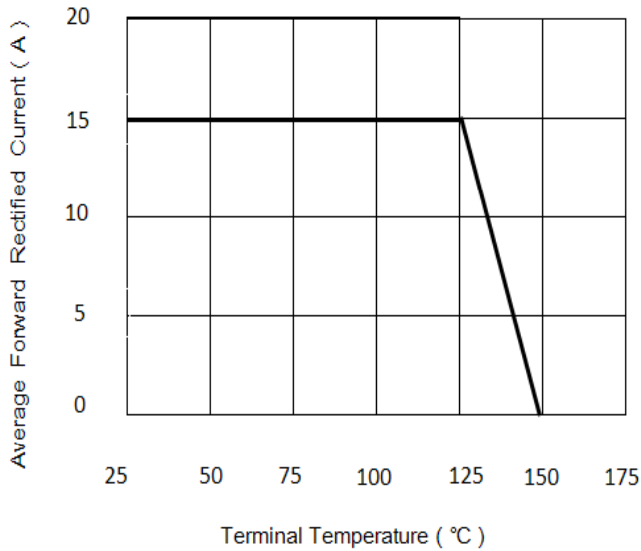


Figure 1. Forward Current Derating Curve

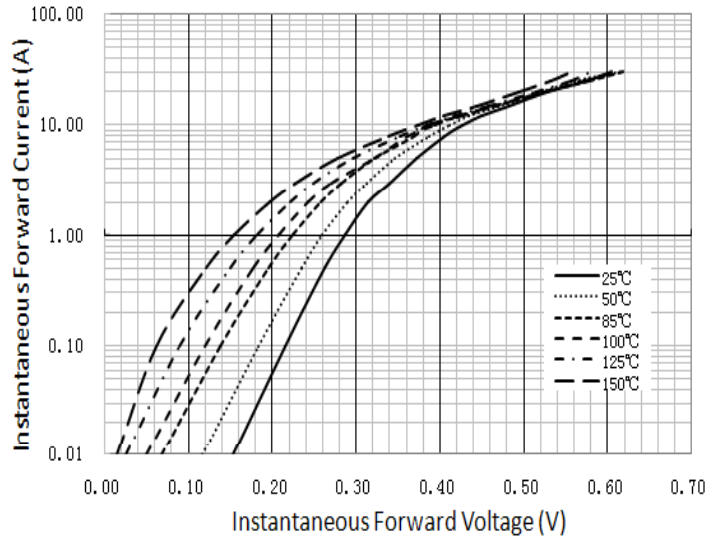


Figure 2. Typical Instantaneous Forward Characteristics

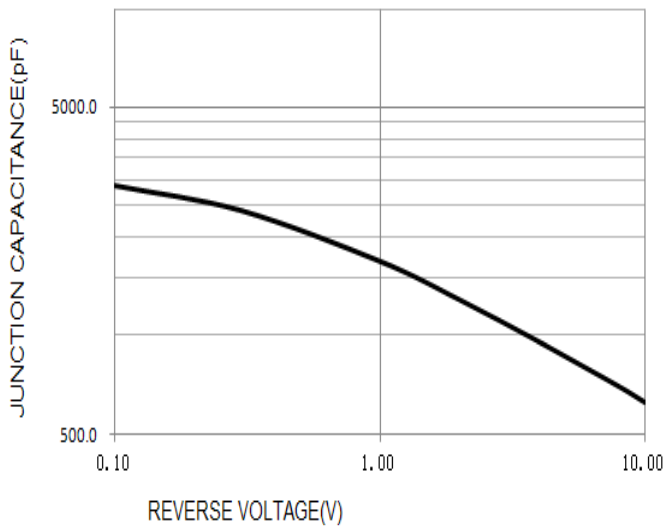


Figure 3. Typical Junction Capacitance

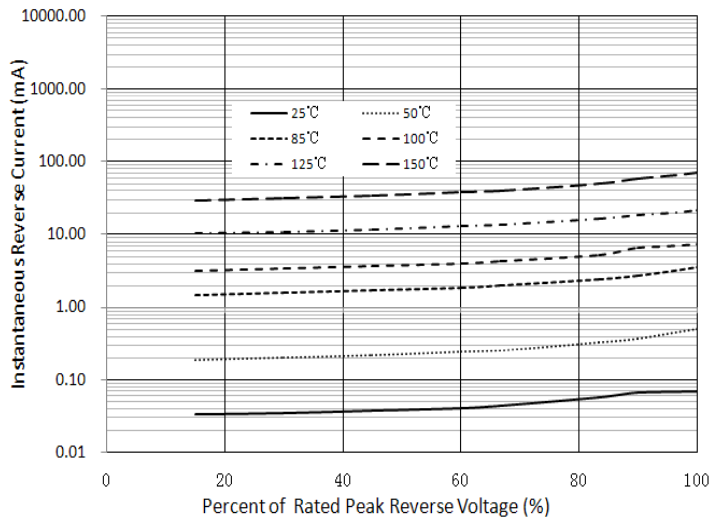


Figure 4. Typical Reverse Characteristics

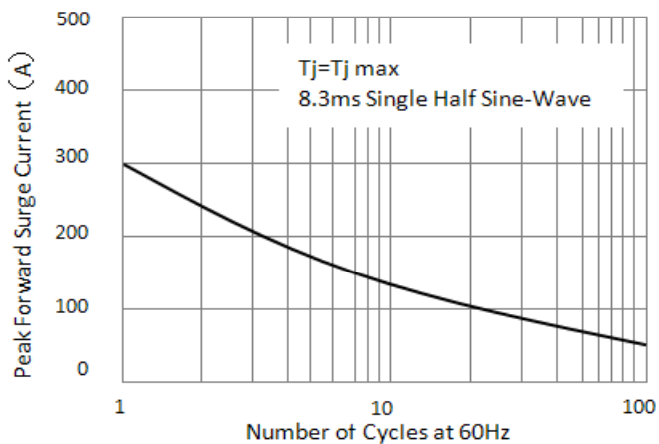
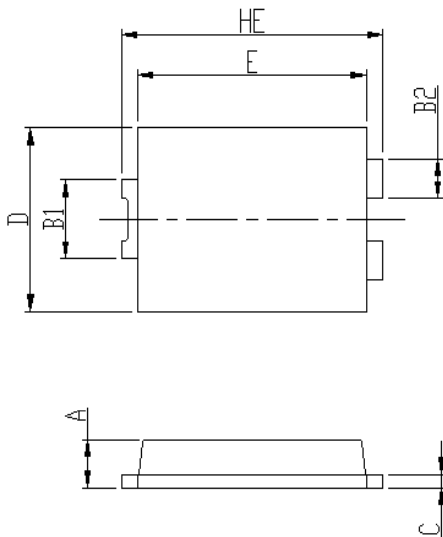


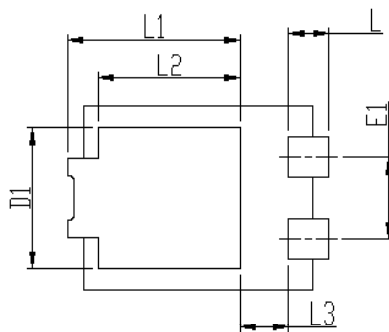
Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

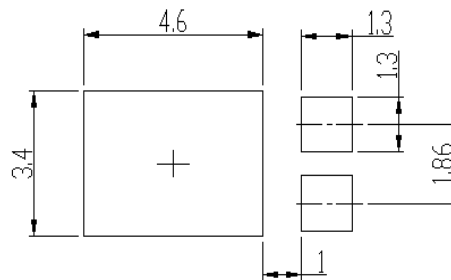
eSGC (TO-277)



| 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



Packing Information

Packing quantities

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

Tape & Reel Specification

