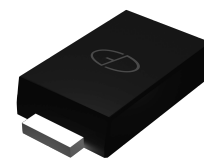


Features

- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Low profile, typical thickness 1.0mm
- Solder dip 260 °C, 10 s



RoHS
COMPLIANT

Package: eSGB(SMAF)

Applications

For uses in low voltage, high frequency inverters, free wheeling and polarity protection applications.

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

| Parameter | Symbol | LS54 | Unit |
|--|-----------------------------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 40 | V |
| Maximum RMS Voltage | V _{RMS} | 28 | V |
| Maximum DC Blocking Voltage | V _{DC} | 40 | V |
| Maximum Average Forward Rectified Current | I _{F(AV)} | 5.0 | A |
| Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load) | I _{FSM} | 150 | 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 | LS54 | Unit |
|--|---|------------------|------|------|
| Instantaneous Forward Voltage | I _F =5A, T _A =25°C | V _F | 0.5 | V |
| | I _F =5A, T _A =125°C | | 0.45 | |
| Maximum DC Reverse Current @ rated DC Blocking Voltage | T _A =25°C | I _R | 0.5 | mA |
| | T _A =125°C | | 20 | |
| Typical Junction Capacitance | 4.0 V, 1 MHz | C _J | 320 | pF |
| Typical Thermal Resistance | Junction to Lead | R _{θJL} | 26 | °C/W |

Note 1) Thermal resistance mounted on PCB with 8.0x8.0mm copper pads

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

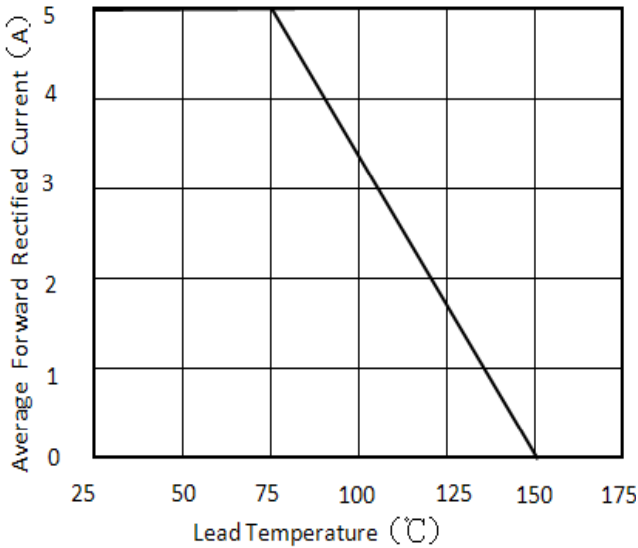


Figure 1. Forward Current Derating Curve

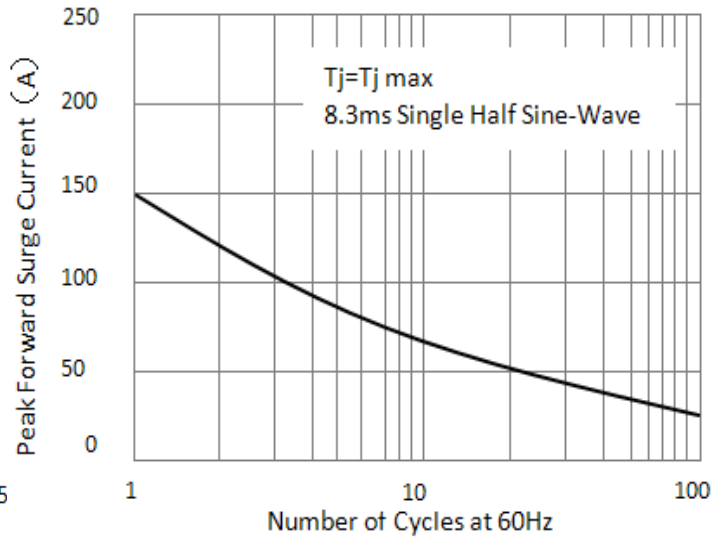


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

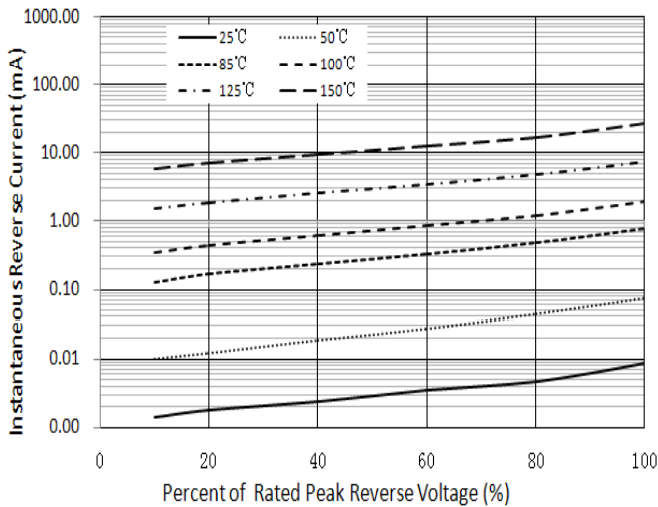


Figure 3. Typical Reverse Characteristics

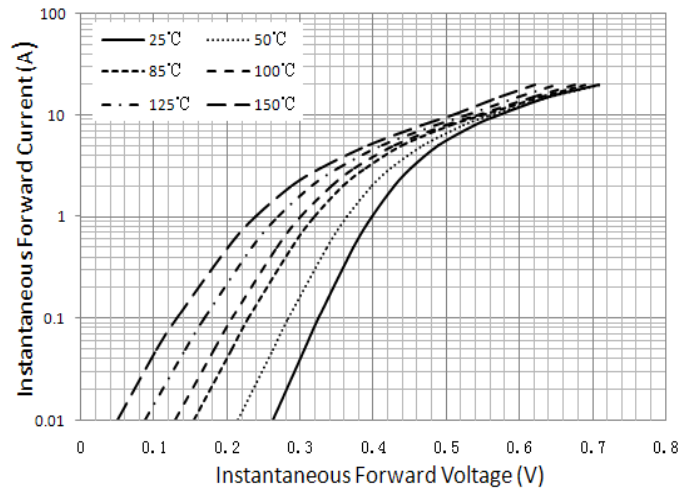
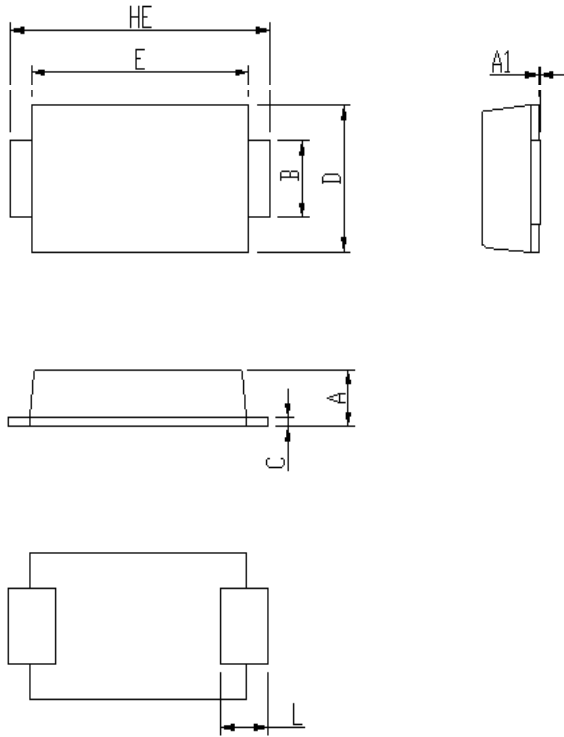


Figure 4. Typical Instantaneous Forward Characteristics

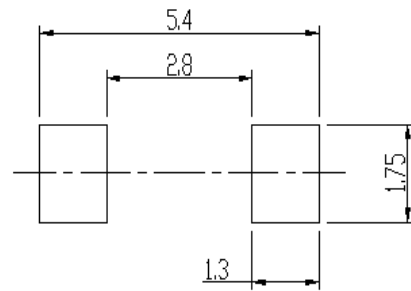
Package Outline Dimensions

eSGB (SMAF)



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.92 | 1.08 | 0.036 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 1.25 | 1.45 | 0.049 | 0.057 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 2.6 | 2.8 | 0.102 | 0.110 |
| E | 4.1 | 4.3 | 0.161 | 0.169 |
| L | 0.8 | 1.0 | 0.031 | 0.039 |
| HE | 4.8 | 5.2 | 0.189 | 0.205 |

Soldering footprint



Packing Information

Packing quantities

3000 pcs/Reel , 12mm Tape, 13" Reel

Tape & Reel Specification

