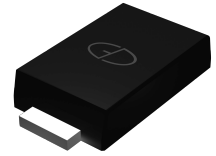


Features

- 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
- AEC-Q101 qualified



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 | LS56T2 | 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)} ¹⁾ | 3.0 | A |
| | I _{F(AV)} ²⁾ | 5.0 | A |
| Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load) | I _{FSM} | 200 | A |
| Rating for Fusing (t<8.3ms) | I ² t | 166.8 | A ² sec |
| 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 | Min | Typ | Max | Unit |
|---|------------------------------|------------------|-----|------|------|------|
| Minimum Breakdown Voltage | I _R =1mA | V _{BR} | 60 | | | V |
| Instantaneous Forward Voltage | I _F =1A, Ta=25°C | V _F | - | 0.41 | 0.42 | V |
| | I _F =2A, Ta=25°C | | - | 0.44 | 0.45 | |
| | I _F =5A, Ta=25°C | | - | 0.51 | 0.52 | |
| | I _F =5A, Ta=125°C | | - | 0.44 | 0.46 | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | Ta=25°C | I _R | - | 5.47 | 25 | uA |
| | Ta=125°C | | - | 2.13 | 3 | mA |
| Typical Junction Capacitance | 4.0 V, 1 MHz | C _J | 610 | | | pF |
| Typical Thermal Resistance ¹⁾ | Juntion to Lead | R _{θJL} | 30 | | | °C/W |

Note1:1) Mounted on FR-4 PCB with 8.0x8.0mm copper pads

2) Mounted on Aluminum PCB

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

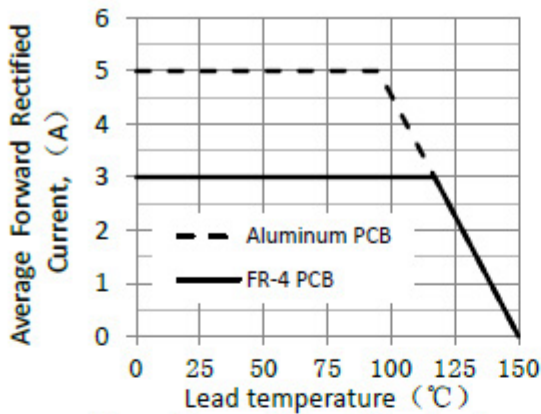


Figure 1. Forward Current Derating Curve

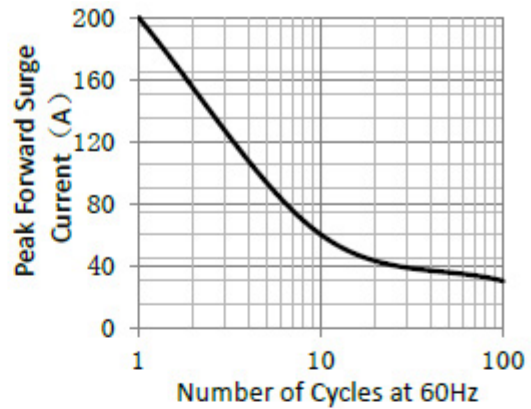


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

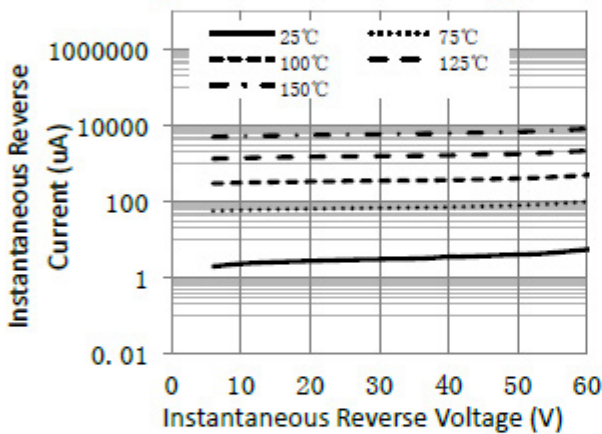


Figure 3. Typical Reverse Characteristics

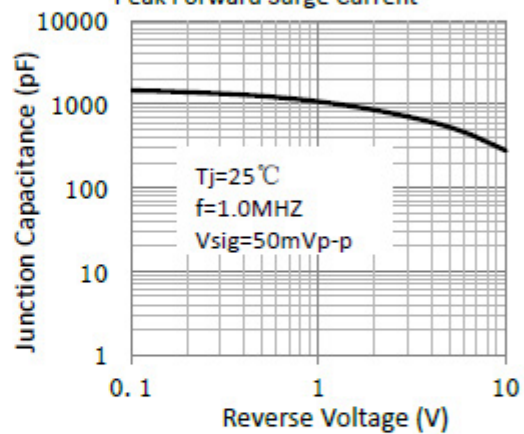


Figure 4. Typical Junction Capacitance

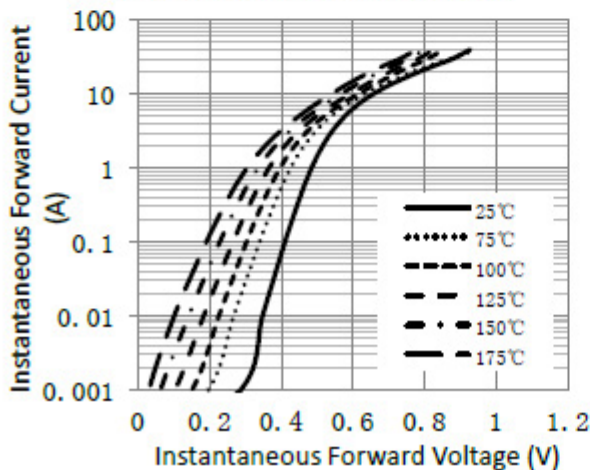
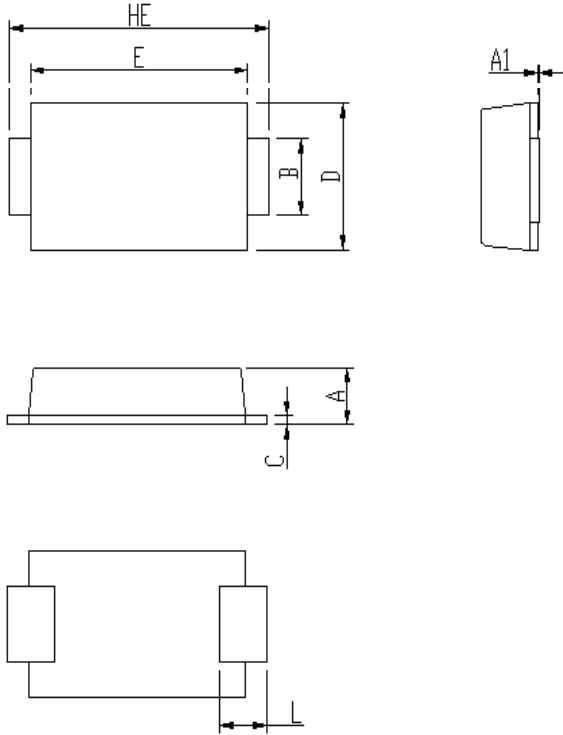


Figure 5. Typical Instantaneous Forward Characteristics

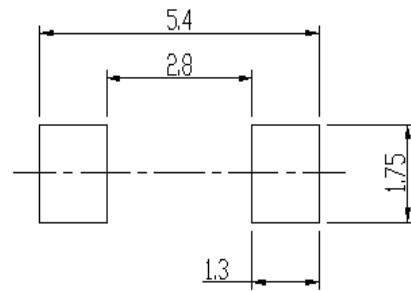
Package Outline Dimensions

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 | 0.7 | 1.1 | 0.028 | 0.043 |
| HE | 4.8 | 5.2 | 0.189 | 0.205 |

Soldering footprint



Packing Information

| Reel size | Quantity/Reel | Quantity/Inner Box | Quantity/Carton |
|-----------|---------------|--------------------|-----------------|
| 7" | 3K | 21K | 84K |
| 13" | 10K | 20K | 180K |

Tape & Reel Specification

