# LF1 thru LF7

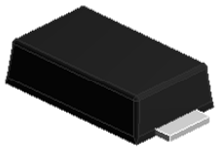
Surface Mount Glass Passivated Fast Recovery Rectifier

Reverse Voltage 50~1000V  Forward Current 1A

## Features

- Glass passivated fast recovery rectifiers
- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile， typical thickness 1.0mm
- AEC-Q101 qualified

RoHS COMPLIANT



eSGB (SMAF)

## Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies, and other consumer applications.

## Maximum Ratings (TA = 25 °C unless otherwise noted)

| Parameter | Symbol | LF1 | LF2 | LF3 | LF4 | LF5 | LF6 | LF7 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | IF(AV) | 1.0 | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM | 30 | | | | | | | A |
| Rating for fusing(t＜8.3ms) | $I^2t$ | 3.7 | | | | | | | $A^2sec$ |
| Operating junction and storage temperature range | TJ, TSTG | - 55 to + 150 | | | | | | | °C |

## Electrical Characteristics (TA = 25 °C unless otherwise noted)

| Parameter | Test Conditions | Symbol | LF1 | LF2 | LF3 | LF4 | LF5 | LF6 | LF7 | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage | IF=1 A,TA=25℃ | $V_F$ | 1.3 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage | TA=25℃<br>TA=125℃ | $I_R$ | 5<br>50 | | | | | | | μA |
| Maximum reverse recovery time | $I_F$=0.5A,$I_R$=1.0A, $I_{rr}$=0.25A | $t_{rr}$ | 150 | | | | 250 | 500 | | nS |
| Typical junction capacitance | 4.0 V, 1 MHz | $C_J$ | 11 | | | | | | | pF |
| Typical thermal resistance[1)] | juntion to case | $R_{\theta JC}$ | 45 | | | | | | | ℃/W |
| | juntion to mount | $R_{\theta JM}$ | 12 | | | | | | | |

Note:1),The thermal resistance from junction to case and mount,mounted on P.C.B with 8×8mm copper pads,2 OZ,FR4 PCB

## Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

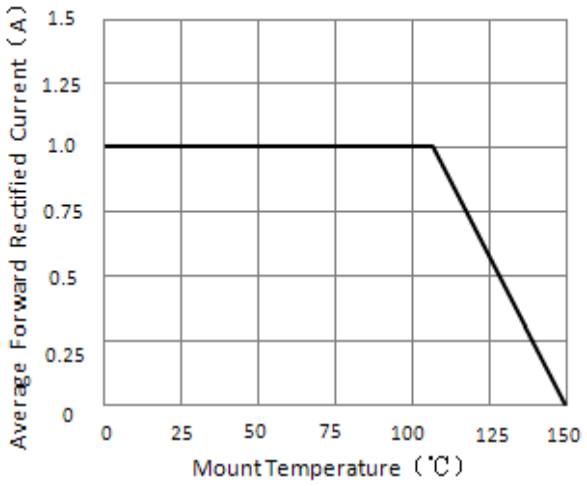



Figure 1.Forward Current Derating Curve

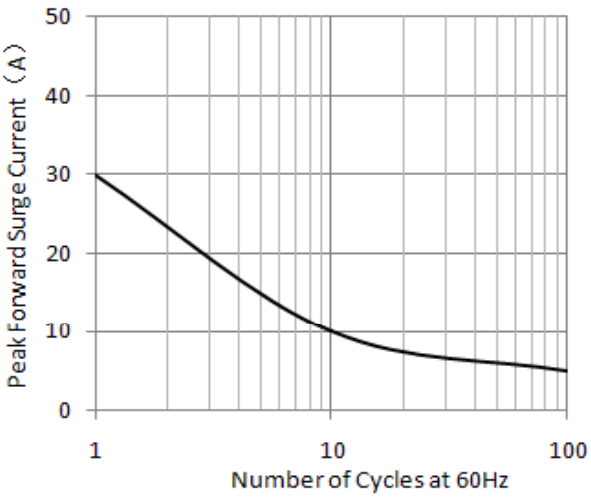



Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

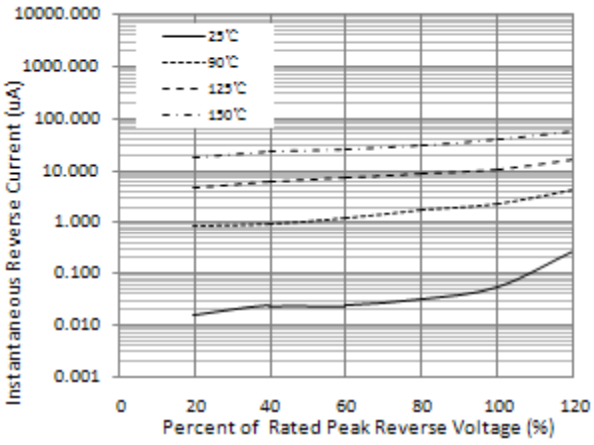



Figure 3. Typical Reverse Characteristics

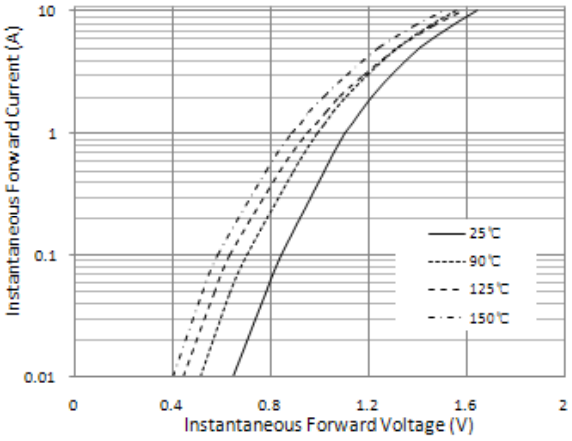
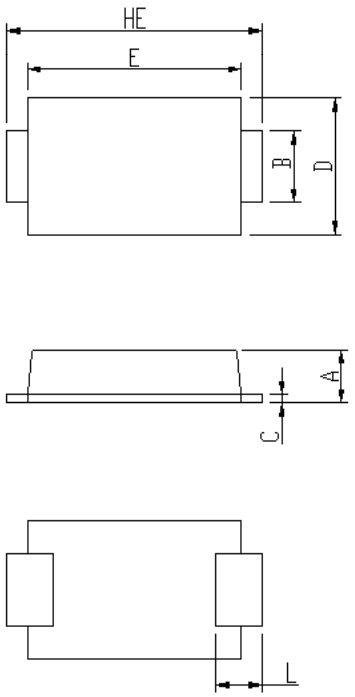


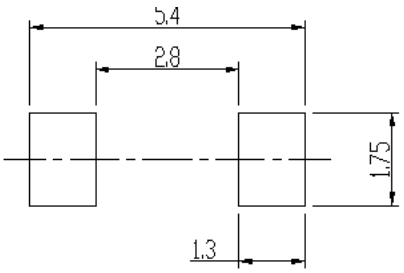

Figure 4. Typical Instantaneous Forward Characteristics

## Package Outline Dimensions




| 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

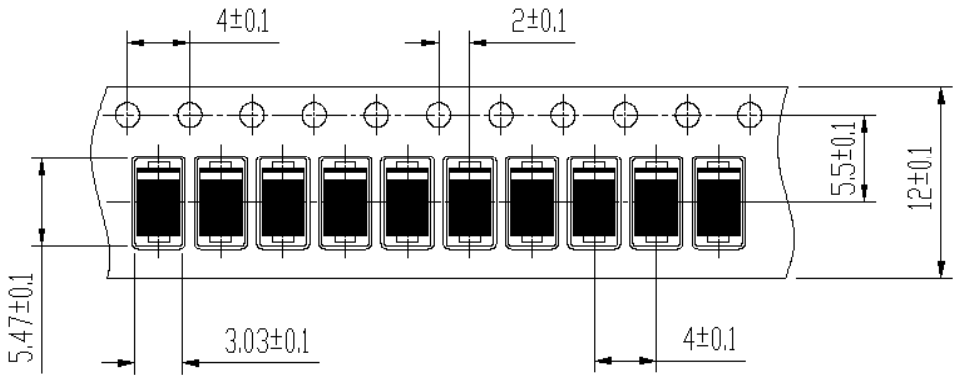



## Packing Information

**Packing quantities:**

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

**Tape & Reel Specification**



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