

Surface Mount Schottky Rectifier Reverse Voltage 40~45V Forward Current 3A

#### **Features**

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





eSGB (SMAF)

### **Typical Applications**

For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

| Maximum Ratings (TA = 25 °C unless otherwise noted)                                |          |               |        |      |  |  |  |
|--|----------|---------------|--------|------|--|--|--|
| Parameter  | Symbol   | LS34A         | LS345A | Unit |  |  |  |
| Maximum repetitive peak reverse voltage  | VRRM     | 40            | 45     | V    |  |  |  |
| Maximum RMS voltage  | VRMS     | 28            | 31.5   | V    |  |  |  |
| Maximum DC blocking voltage  | VDC      | 40            | 45     | V    |  |  |  |
| Maximum average forward rectified current at TL (See Fig.1)                        | IF(AV)   | 3.0           |        | А    |  |  |  |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM     | 55            |        | А    |  |  |  |
| Operating junction and storage temperature range                                   | TJ, TSTG | - 55 to + 150 |        | °C   |  |  |  |

| Electrical Characteristics (TA = 25 °C unless otherwise noted) |                 |                |       |        |        |  |  |  |
|--|-----------------|----------------|-------|--------|--------|--|--|--|
| Parameter  | Test Conditions | Symbol         | LS34A | LS345A | Unit   |  |  |  |
| Maximum Instantaneous forward voltage                          | IF=3A, TA=25℃   | VF             | 0.52  |        | Volts  |  |  |  |
| Maximum DC reverse current at rated DC blocking voltage        | TA=25℃          | IR             | 1     |        | mA     |  |  |  |
| Typical junction capacitance                                   | 4.0 V, 1 MHz    | CJ             | 160   |        | pF     |  |  |  |
| Typical thermal resistance <sup>1)</sup>                       | juntion to case | $R_{	heta JC}$ | 50    |        | °C/W   |  |  |  |
|  | juntion to lead | $R_{	heta JL}$ | 3     | 35     | J 0/VV |  |  |  |

Note1:Thermal resistance from junction to case and lead,mounted on PCB with 8.0×8.0mm copper pads

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#### Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

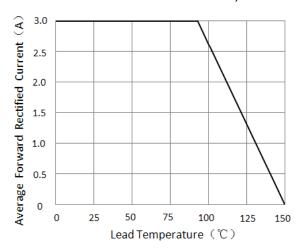


Figure 1. Forward Current Derating Curve

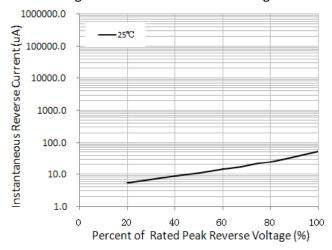


Figure 3. Typical Reverse Characteristics

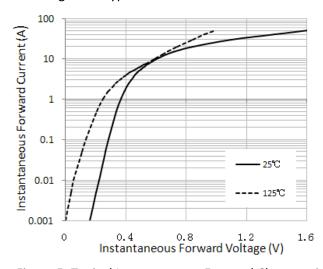


Figure 5. Typical Instantaneous Forward Characteristics

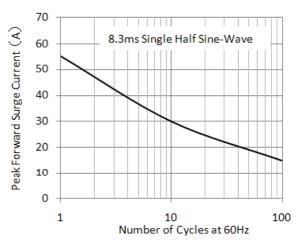


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

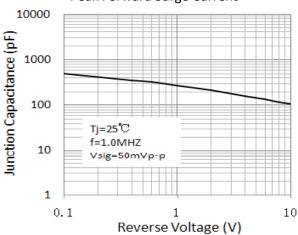


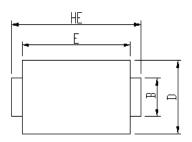
Figure 4. Typical Junction Capacitance



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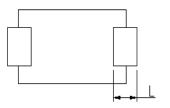
## **Package Outline Dimensions**

in inches (millimeters)



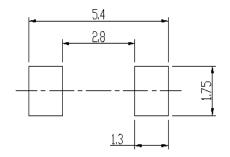






| DIM | Unit: mm |      | Unit: inch |       |
|-----|----------|------|------------|-------|
|     | MIN      | MAX  | MIN        | MAX   |
| Α   | 0.92     | 1.08 | 0.036      | 0.043 |
| A1  | 0        | 0.1  | 0.000      | 0.004 |
| В   | 1.25     | 1.45 | 0.049      | 0.057 |
| С   | 0.1      | 0.25 | 0.004      | 0.010 |
| D   | 2.6      | 2.8  | 0.102      | 0.110 |
| Е   | 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

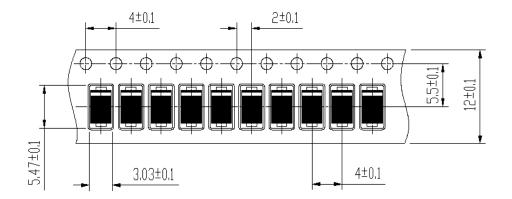


## **Packing Information**

#### Packing quantities:

10,000 pcs/Reel, 12mm Tape, 13" Reel

**Tape & Reel Specification** 



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