

## ■ Features

- Low power losses, high efficiency
- Low forward voltage drop, low reverse current
- Compliant with RoHS requirements, lead-free, halogen-free
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

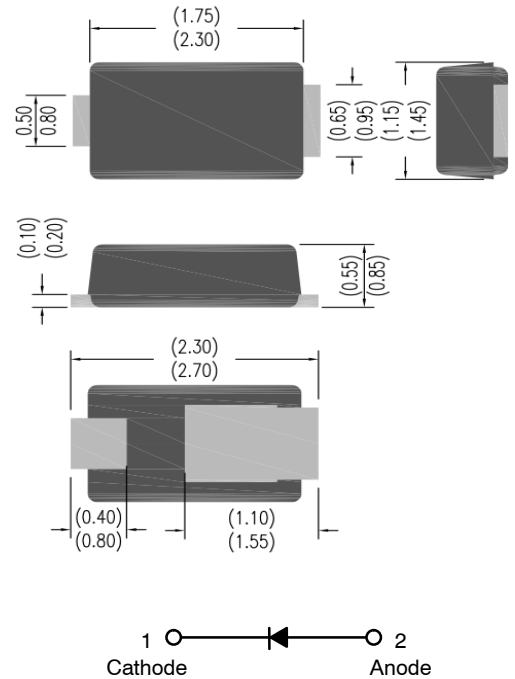
## ■ MECHANICAL DATA

- Package: SOD-323HE
- Terminals: Tin plated leads, solderable per
- Polarity: Cathode line denotes the cathode end

## ■ APPLICATIONS

- DC/DC converters
- Freewheeling
- low voltage high frequency inverters
- polarity protection applications

### SOD-323HE



## ■ Maximum Ratings (Ta=25 °C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | LMBR 120ET1G | LMBR 130ET1G | LMBR 140ET1G | LMBR 150ET1G | LMBR 160ET1G | LMBR 180ET1G | LMBR 1100ET1G | LMBR 1150ET1G | LMBR 1200ET1G |
|---|------------------|------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| Repetitive peak reverse voltage   | V <sub>RRM</sub> | V    | 20           | 30           | 40           | 50           | 60           | 80           | 100           | 150           | 200           |
| Average rectified output current @60Hz sine wave, Resistance load, Ta (FIG.1)           | I <sub>O</sub>   | A    | 1.0          |              |              |              |              |              |               |               |               |
| Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>J</sub> =25°C | I <sub>FSM</sub> | A    | 25           |              |              |              |              |              |               |               |               |
| Storage temperature   | T <sub>STG</sub> | °C   | -55 ~+150    |              |              |              |              |              |               |               |               |
| Junction temperature  | T <sub>J</sub>   | °C   | -55 ~+1      |              |              |              |              |              |               |               |               |

## ■ Electrical Characteristics (Ta=25 °C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | TEST CONDITIONS       | LMBR 120ET1G | LMBR 130ET1G | LMBR 140ET1G | LMBR 150ET1G | LMBR 160ET1G | LMBR 180ET1G | LMBR 1100ET1G | LMBR 1150ET1G | LMBR 1200ET1G |
|---|------------------|------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| Maximum instantaneous forward voltage drop per diode  | V <sub>F</sub>   | V    | I <sub>FM</sub> =1.0A | 0.55         |              |              | 0.70         |              | 0.85         |               | 0.95          |               |
| Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub> | I <sub>RRM</sub> | mA   | T <sub>a</sub> =25°C  | 0.50         |              |              |              |              | 0.10         |               |               |               |
|   |                  |      | T <sub>a</sub> =100°C | 10           |              |              |              |              | 5            |               |               |               |



■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER          | SYMBOL | UNIT | LMBR 120ET1G      | LMBR 130ET1G | LMBR 140ET1G | LMBR 150ET1G | LMBR 160ET1G | LMBR 180ET1G | LMBR 1100ET1G | LMBR 1150ET1G | LMBR 1200ET1G |
|--------------------|--------|------|-------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| Thermal Resistance | RθJ-A  | °C/W | 199 <sup>1)</sup> |              |              |              |              |              |               |               |               |
|                    | RθJ-L  |      | 21 <sup>1)</sup>  |              |              |              |              |              |               |               |               |

Note: 1. Per JESD51-3 Recommended Thermal Test Board. Device mounted on FR-4 PCB, board size = 76.2 mm x 114.3 mm

■ Characteristics (Typical)

FIG1:Io-TL Curve

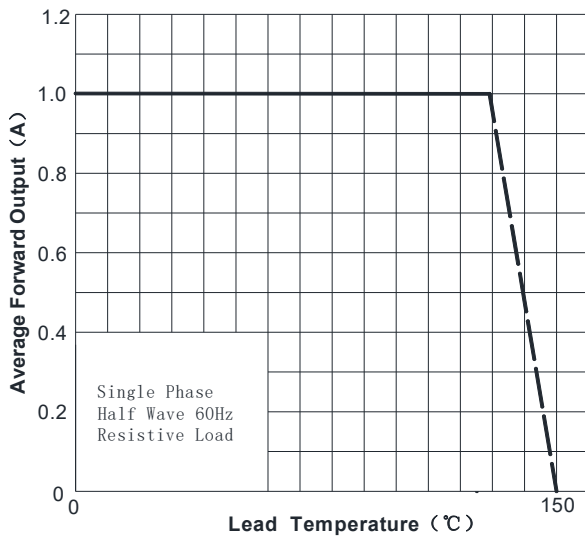


FIG2: Surge Forward Current Capability

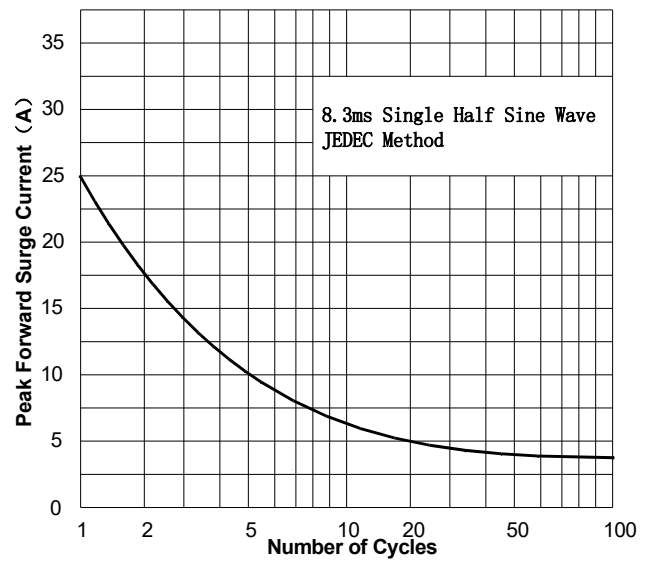


FIG3: Forward Voltage

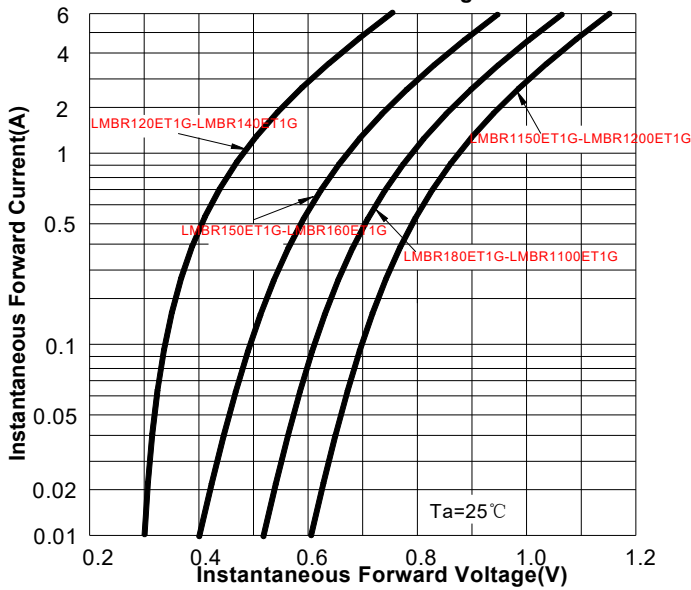
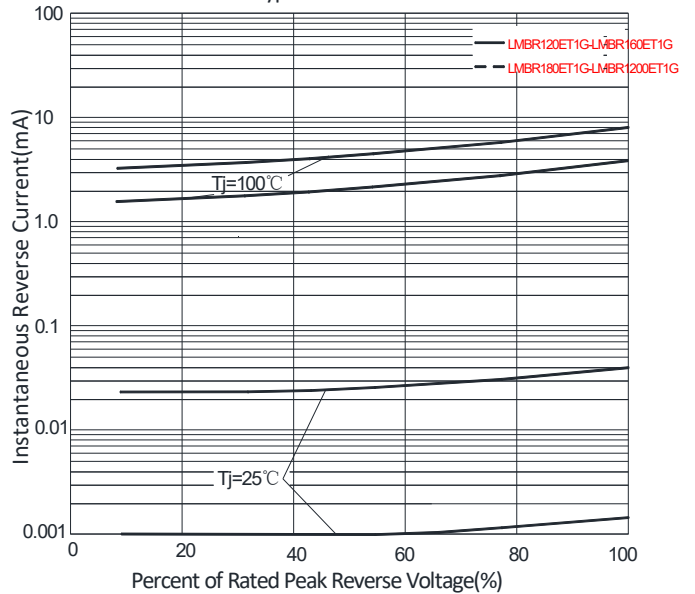


FIG4: Typical Reverse Characteristics



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