

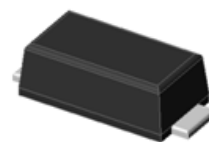
2A,30-60V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



RoHS
COMPLIANT



eSGA (SOD-123FL)

Applications

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

| Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted) | | | | | |
|--|--------------------|-------------|-------|-------|------|
| Parameter | Symbol | FSL23 | FSL24 | FSL26 | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 30 | 40 | 60 | V |
| Maximum RMS voltage | V _{RMS} | 21 | 28 | 42 | V |
| Maximum DC blocking voltage | V _{DC} | 30 | 40 | 60 | V |
| Maximum average forward rectified current | I _{F(AV)} | 2 | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode | I _{FSM} | 50 | 80 | 50 | A |
| Operating junction temperature range | T _J | -55 to +125 | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | °C |

| Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted) | | | |
|---|------------------|-----|--------|
| Parameter | Symbol | Typ | Unit |
| Thermal Resistance, Junction to Ambient | R _{θJA} | 100 | °C / W |
| Thermal Resistance, Junction to Case | R _{θJC} | 20 | °C / W |
| Thermal Resistance, Junction to Lead | R _{θJL} | 20 | °C / W |



Electrical Specifications (T_A=25°C unless otherwise noted)

| Parameter | Symbol | Test Conditions | FSL23 | FSL24 | FSL26 | Unit |
|------------------------------|----------------|----------------------|-------|-------|-------|------|
| Forward Drop Voltage | V _F | I _F =2A | 0.50 | 0.43 | 0.50 | V |
| Reverse leakage current @VR | I _R | T _J =25°C | 500 | 1000 | 1000 | uA |
| Typical junction capacitance | C _J | 4.0 V 1 MHz | 103 | 165 | 124 | pF |

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

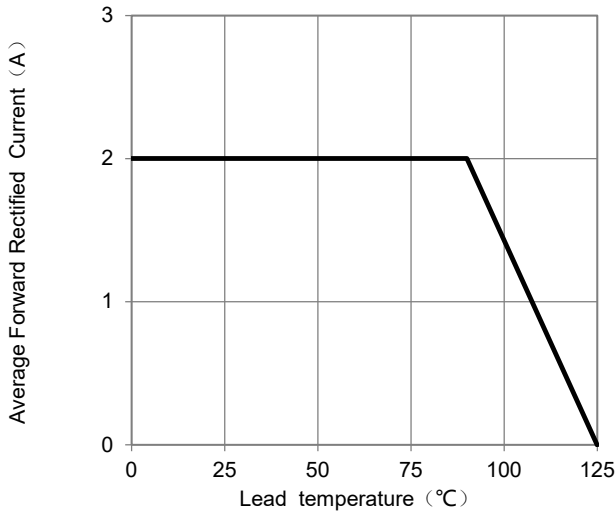


Fig.1 - Forward Current Derating Curve

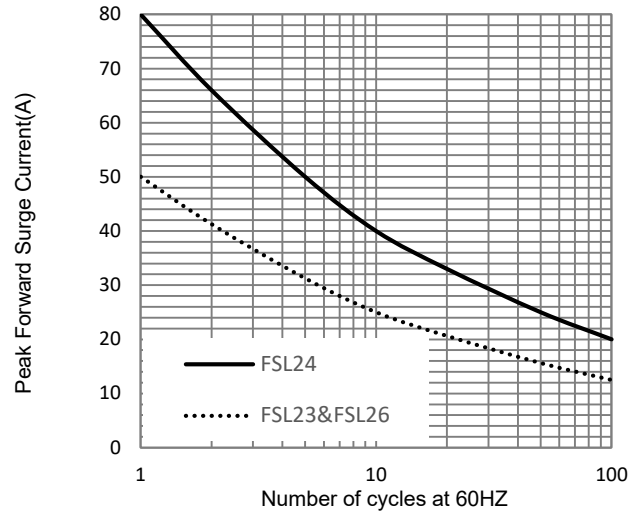


Fig.2 - Maximum Non-Repetitive Surge Current

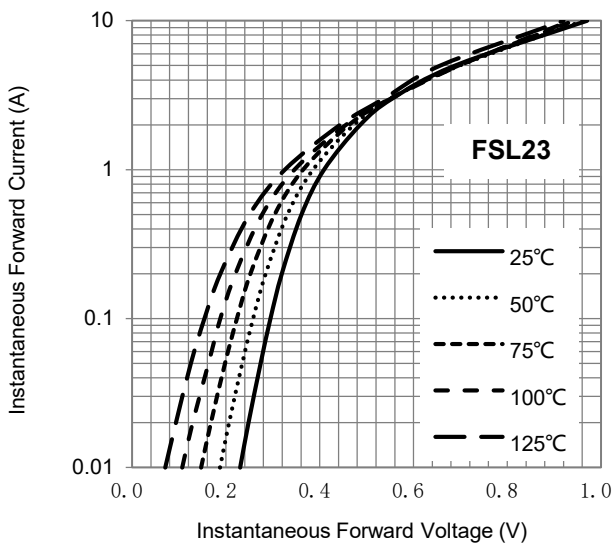


Fig.3 - Typical Forward Voltage Characteristics

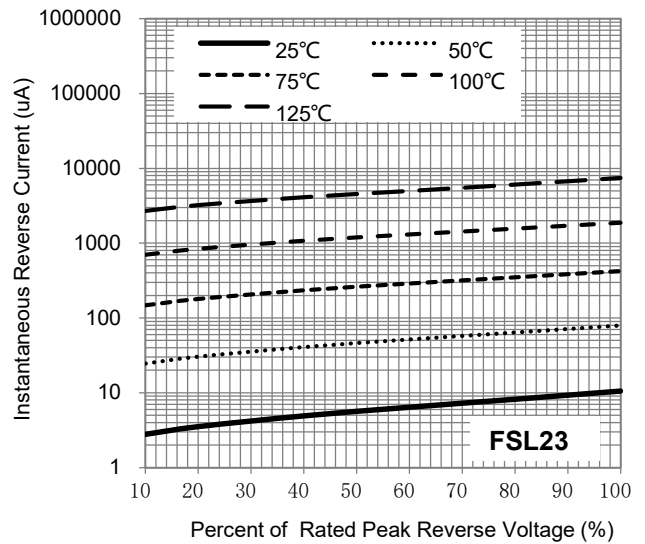


Fig.4 - Typical Reverse Current Characteristics

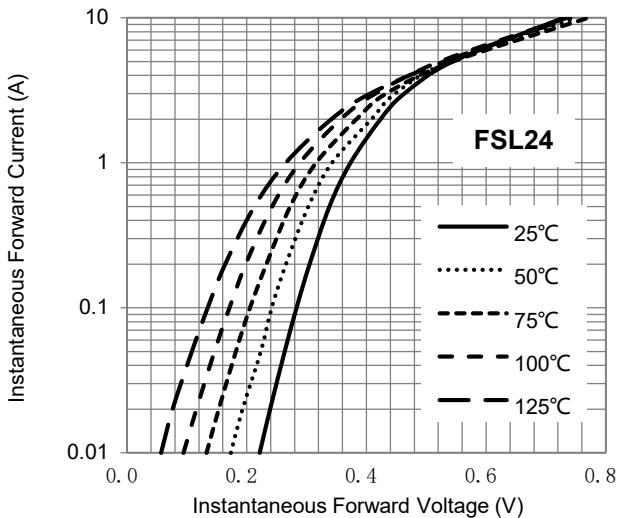


Fig.5 - Typical Forward Voltage Characteristics

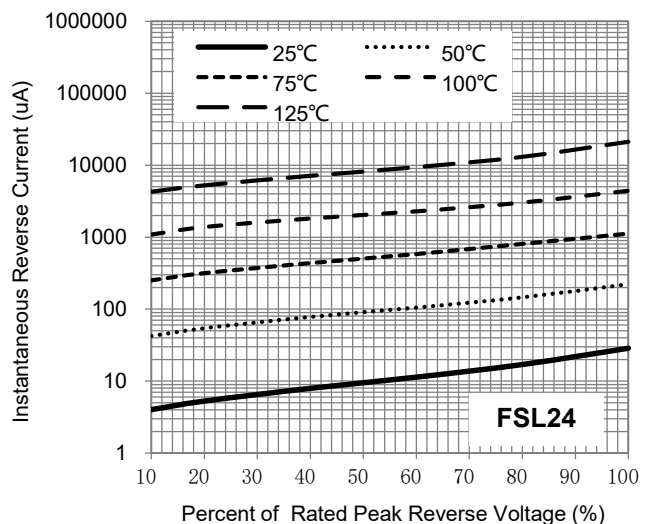


Fig.6 - Typical Reverse Current Characteristics

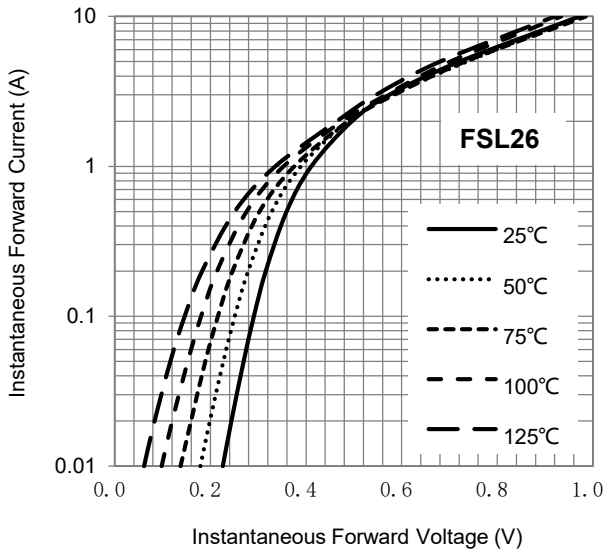


Fig.1 -Forward Current Derating Curve

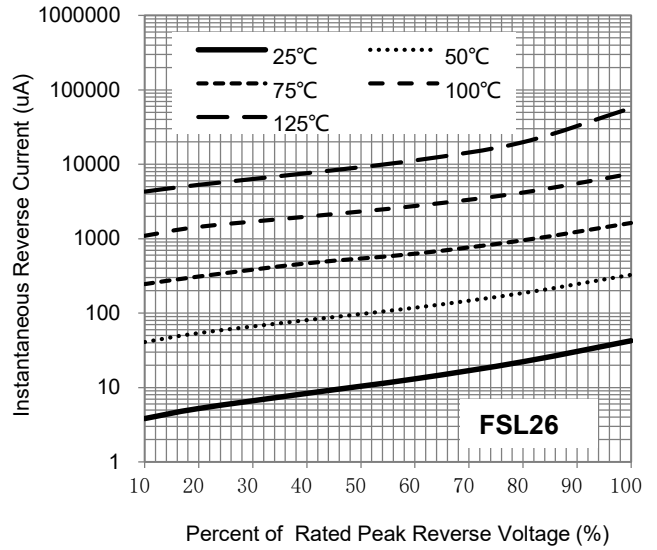


Fig.2 - Maximum Non-Repetitive Surge Current

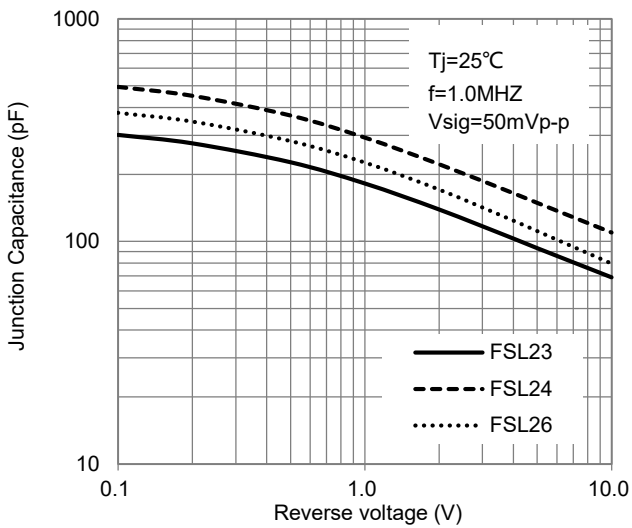
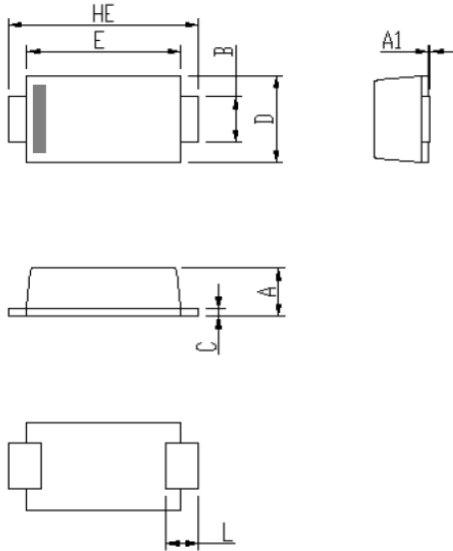


Fig.3 -Typical Forward Voltage Characteristics

Package Outline Dimensions

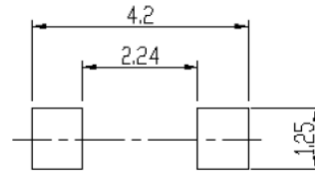
in inches (millimeters)

eSGA (SOD-123FL)



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.9 | 1.08 | 0.035 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 0.85 | 1.05 | 0.033 | 0.041 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 1.7 | 2 | 0.067 | 0.079 |
| E | 2.9 | 3.1 | 0.114 | 0.122 |
| L | 0.43 | 0.83 | 0.017 | 0.033 |
| HE | 3.5 | 3.9 | 0.138 | 0.154 |

Soldering footprint



Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|---|
| Rev.A | 2021.06.05 | Released Datasheet |
| Rev.B | 2023.06.19 | Modify document format; FS22N, FS22NS, FSL23S and FS24N EOL |
| Rev.C | 2023.10.19 | Modify document format |

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