

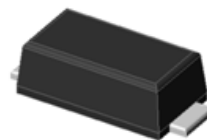
2A,150-200V Schottky Barrier Rectifiers

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
- AEC-Q101 Qualified



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 | AFS2B5H | AFS2CH | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 150 | 200 | V |
| Maximum RMS voltage | V _{RMS} | 105 | 140 | V |
| Maximum DC blocking voltage | V _{DC} | 150 | 200 | 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 | I _{FSM} | 50 | | A |
| Operating junction temperature range | T _J | -55 to +150 | | °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 _{thJA} | 100 | °C /W |
| Thermal Resistance, Junction to Case | R _{thJC} | 20 | °C /W |
| Thermal Resistance, Junction to Lead | R _{thJL} | 20 | °C /W |

| Electrical Specifications(T _A =25°C unless otherwise noted) | | | | | |
|------------------------------------------------------------------------|----------------|-----------------------|---------|--------|------|
| Parameter | Symbol | Test Conditions | AFS2B5H | AFS2CH | Unit |
| Maximum forward drop voltage | V _F | I _F =2A | 0.85 | | V |
| Maximum reverse leakage current @V _R | I _R | T _J =25°C | 0.2 | | mA |
| | | T _J =125°C | 30 | | |

Note:

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

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

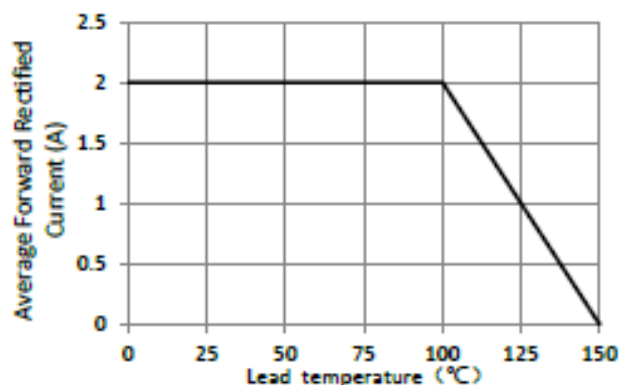


Figure 1. Forward Current Derating Curve

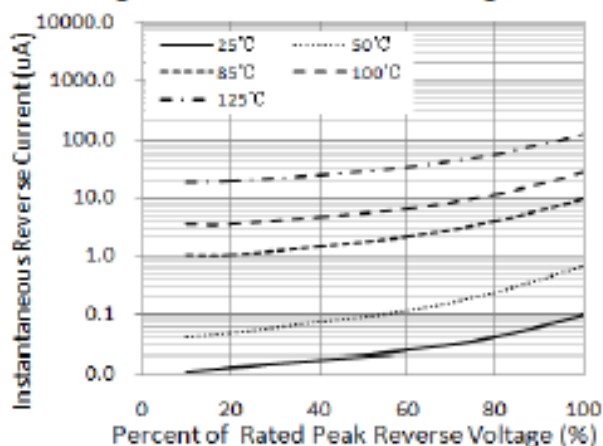


Figure 3. Typical Instantaneous Reverse Characteristics

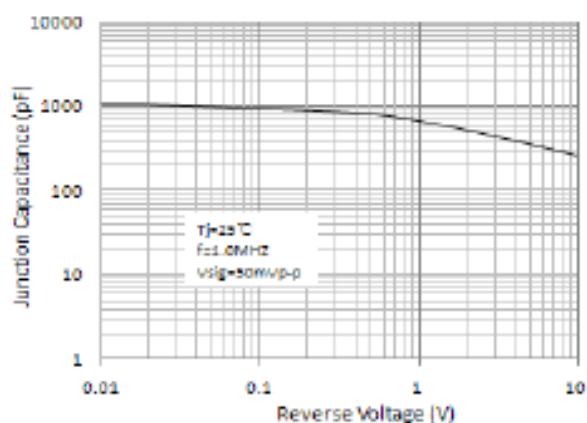


Figure 5. Typical Junction Capacitance

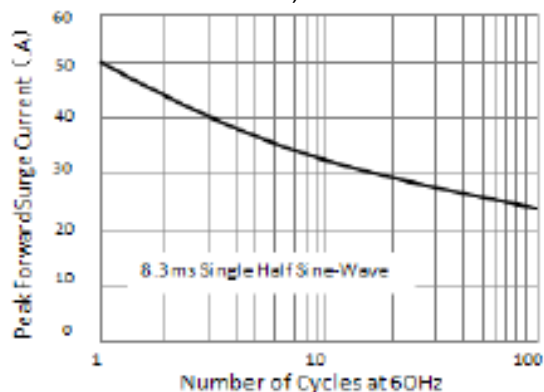


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

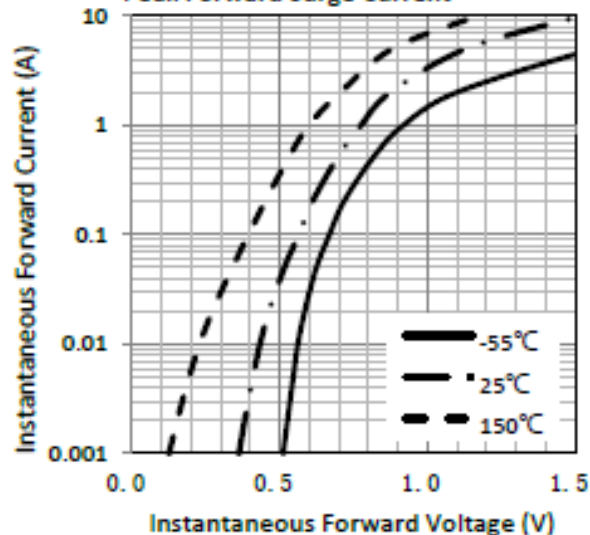
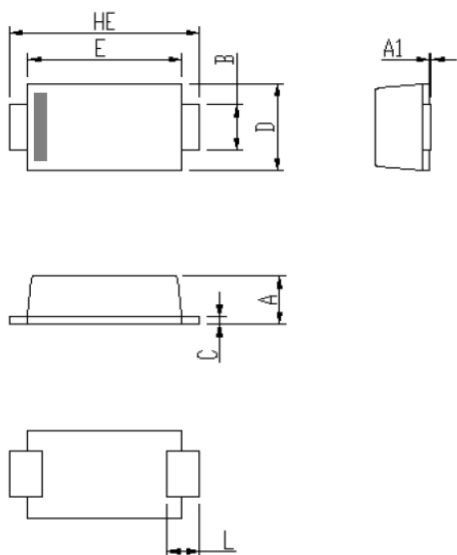


Figure 4. Typical Instantaneous Forward Characteristics

Package Outline Dimensions

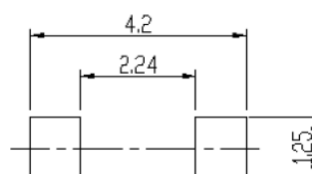
in inches (millimeters)

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



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