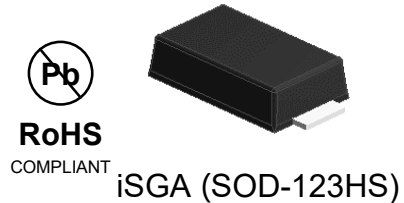


1A,50-60V Schottky Barrier Rectifiers

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



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 | PS15 | PS16 | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 60 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 42 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 60 | V |
| Maximum average forward rectified current | I _{F(AV)} | 1 | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode | I _{FSM} | 30 | | 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 _{θJA} | 65 | °C / W |
| Thermal Resistance, Junction to Case | R _{θJC} | 35 | °C / W |
| Thermal Resistance, Junction to Lead | R _{θJL} | 9 | °C / W |

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

| Parameter | Symbol | Test Conditions | Typ | Max | Unit |
|---|----------------|---|------|------|------|
| Forward Drop Voltage | V _F | I _F =1A T _A =25°C | 0.61 | 0.65 | V |
| | | I _F =1A T _A =125°C | 0.54 | 0.60 | |
| Reverse leakage current @V _R | I _R | T _J =25°C | 6.36 | 50 | uA |
| | | T _J =125°C | 3.41 | 10 | mA |
| Typical junction capacitance | C _J | 4.0 V 1 MHz | 34 | | pF |

Note:

1. The thermal resistance from junction to ambient or lead, mounted on copper pad area of 5.0 x 5.0mm to each terminal.
2. The thermal resistance from junction to case, mounted on recommended copper pad to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

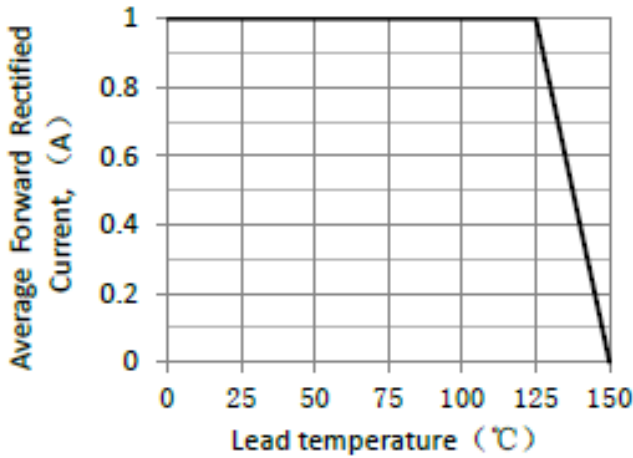


Figure 1. Forward Current Derating Curve

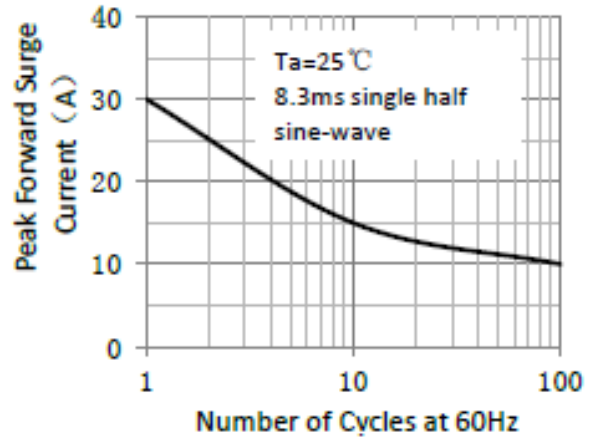


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

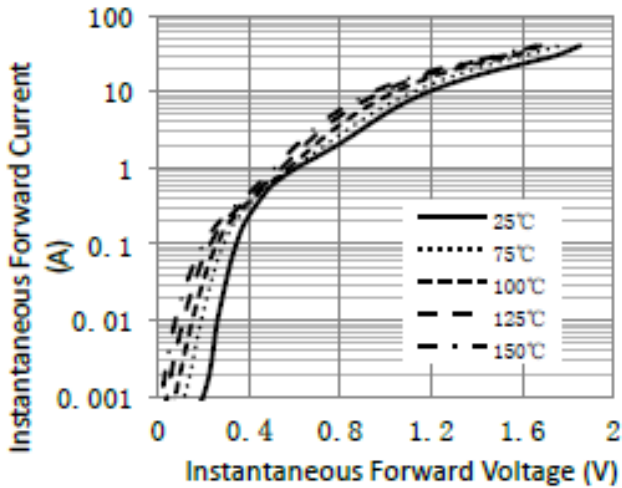


Figure 3. Typical Instantaneous Forward Characteristics

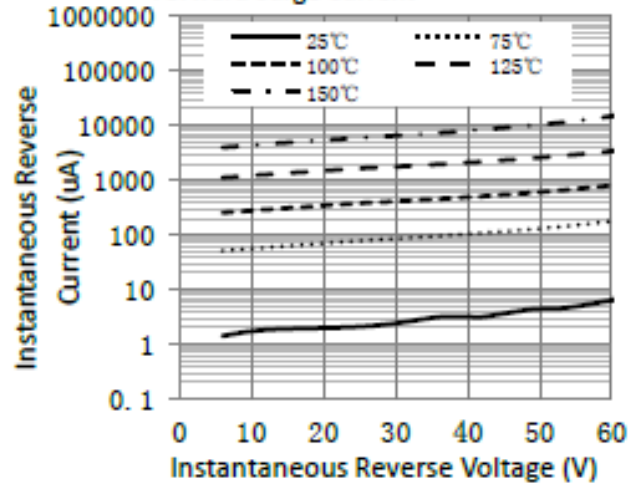


Figure 4. Typical Reverse Characteristics

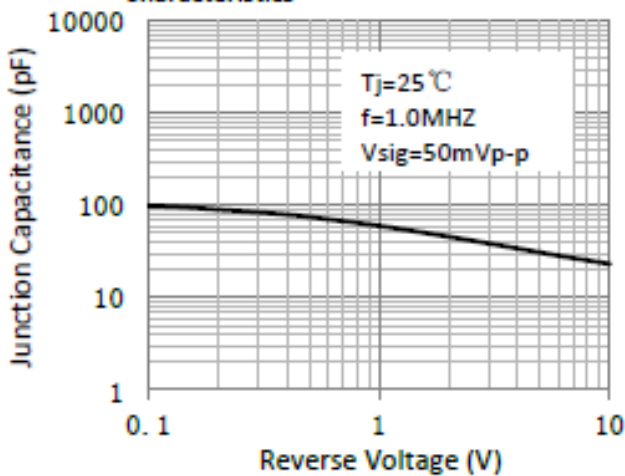
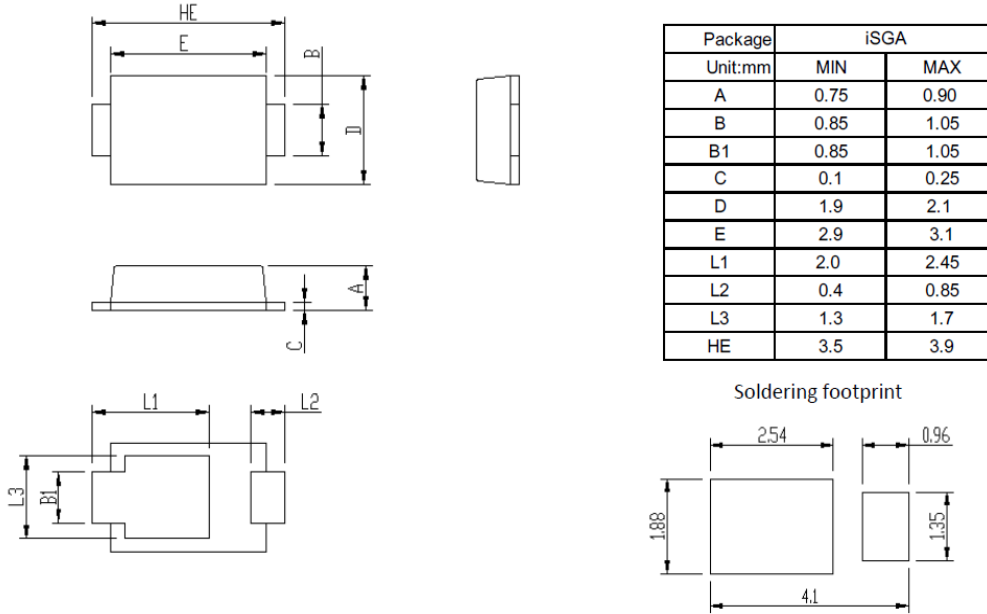


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

iSGA (SOD-123HS)



Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A | 2021.06.01 | Released Datasheet |
| Rev.B | 2023.10.17 | Modify document format |

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