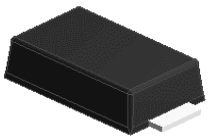
# 2A,40V Schottky Barrier Rectifier

## Features

- Low leakage current
- Schottky barrier diode
- 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℃/10 seconds

RoHS COMPLIANT



iSGA (SOD-123HS)

## Applications

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

## Maximum Ratings & Electrical Characteristics ($T_A$=25℃ unless otherwise noted)

| Parameter | Symbol | PSL24 | Unit |
|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 40 | V |
| Maximum RMS voltage | $V_{RMS}$ | 28 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 40 | 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 | 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℃ unless otherwise noted)

| Parameter | Symbol | Typ | Unit |
|---|---|---|---|
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 60 | °C /W |
| Thermal Resistance, Junction to Case | $R_{\theta JC}$ | 28 | °C /W |
| Thermal Resistance, Junction to Lead | $R_{\theta JL}$ | 6 | °C /W |

| **Electrical Specifications**($T_A$=25℃ unless otherwise noted) | | | | |
|---|---|---|---|---|
| **Parameter** | **Symbol** | **Test Conditions** | **PSL24** | **Unit** |
| Forward Drop Voltage | $V_F$ | $I_F$=1A | 0.40 | V |
| | | $I_F$=2A | 0.45 | |
| Reverse leakage current @$V_R$ | $I_R$ | $T_J$ =25℃ | 200 | uA |
| | | $T_J$ =100℃ | 20 | mA |
| Typical junction capacitance | $C_J$ | 4.0 V<br>1 MHZ | 120 | 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℃ unless otherwise noted)

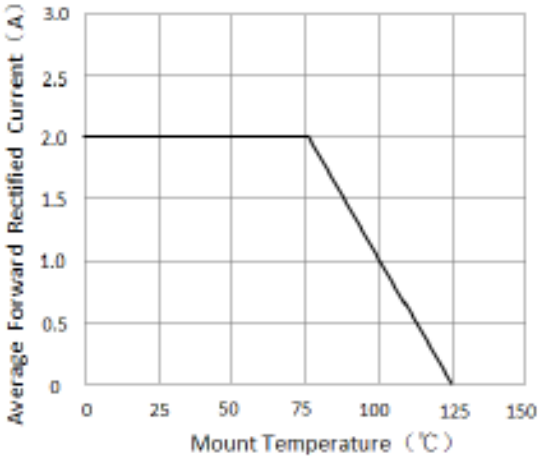



Figure 1.Forward Current Derating Curve

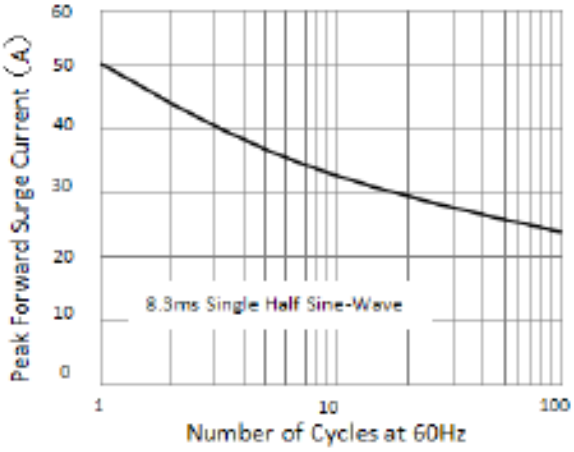



Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

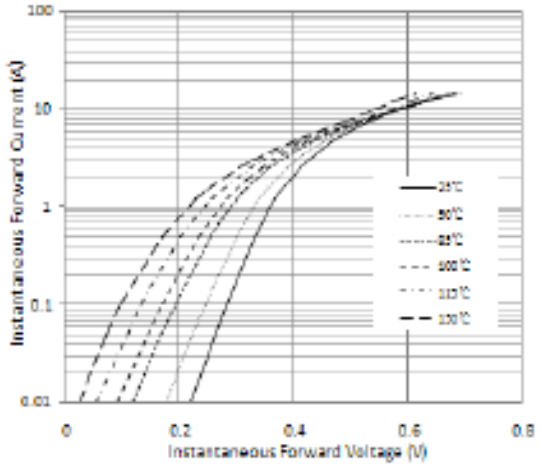



Figure 3. Typical Instantaneous Forward Characteristics

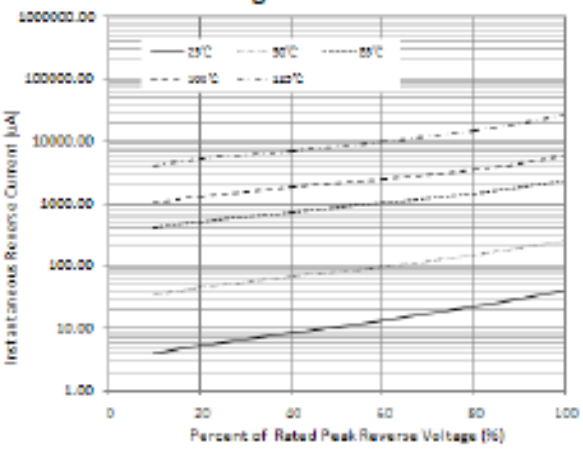



Figure 4. Typical Reverse Characteristics

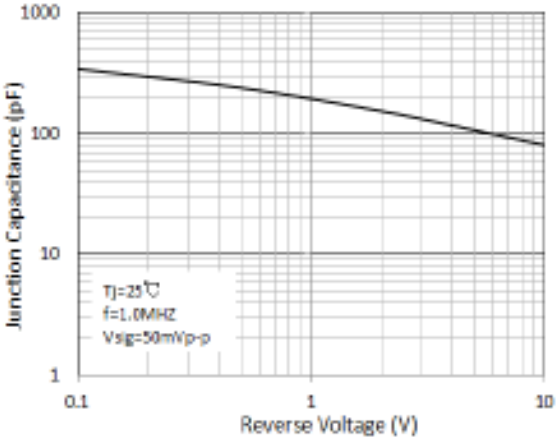
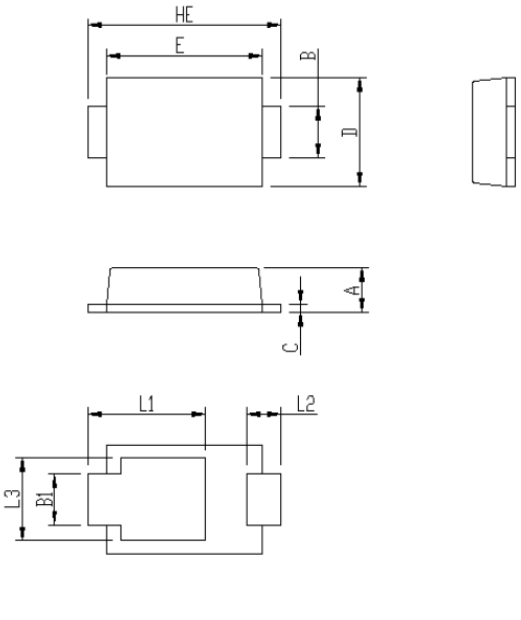



Figure 5. Typical Junction Capacitance

## Package Outline Dimensions

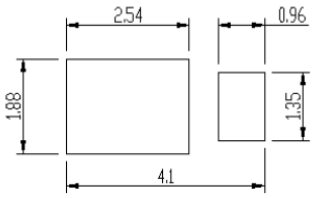
in inches (millimeters)

### iSGA (SOD-123HS)




| Package | iSGA | |
|---|---|---|
| Unit:mm | MIN | MAX |
| A | 0.75 | 0.90 |
| B | 0.85 | 1.05 |
| B1 | 0.85 | 1.05 |
| C | 0.1 | 0.25 |
| D | 1.9 | 2.1 |
| E | 2.9 | 3.1 |
| L1 | 2.0 | 2.45 |
| L2 | 0.4 | 0.85 |
| L3 | 1.3 | 1.7 |
| HE | 3.5 | 3.9 |

Soldering footprint




## 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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