# Schottky Diodes

## Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7s, per JESD 22-B106

## Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

## Mechanical Data

- **Package**: DO-201AD
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: Color band denotes cathode end

## ■Maximum Ratings ($T_a$=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | SB1240 |
|---|---|---|---|
| Device Marking Code | | | SB1240 |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 45 |
| Average Rectified Output Current @60Hz sine wave, R-load, $T_a$=25℃ | $I_O$ | A | 12 |
| Surge(Non-repetitive)Forward Current @60Hz half sine wave, 1 cycle, $T_a$=25℃ | $I_{FSM}$ | A | 275 |
| Current Squared Time @1ms≤t≤8.3ms Tj=25℃ | $I^2t$ | $A^2s$ | 315 |
| Storage Temperature | $T_{stg}$ | ℃ | -55 ~+150 |
| Junction Temperature IN DC Forward Mode-Forward Operations，without reverse bias, t ≤1 h (Fig. 1)① | $T_j$ | ℃ | -55 ~+200 |

**NOTE**

① Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | SB1240 |
|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_{FM}$ | V | $I_{FM}$=12.0A | 0.55 |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_{RRM1}$ | mA | $V_{RM}$=$V_{RRM}$ $T_a$=25℃ | 0.5 |
| | $I_{RRM2}$ | | $V_{RM}$=$V_{RRM}$ $T_a$=100℃ | 20 |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | SB1240 |
|---|---|---|---|---|
| Thermal Resistance | Between junction and case | $R_{\theta J-C}$ | ℃/W | 1.9 |

## ■Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|
| SB1240 | Approximate 1.12 | 1250 | 4 | 6000 | Reel |

## ■Characteristics (Typical)

FIG1:Io -Tc Curve

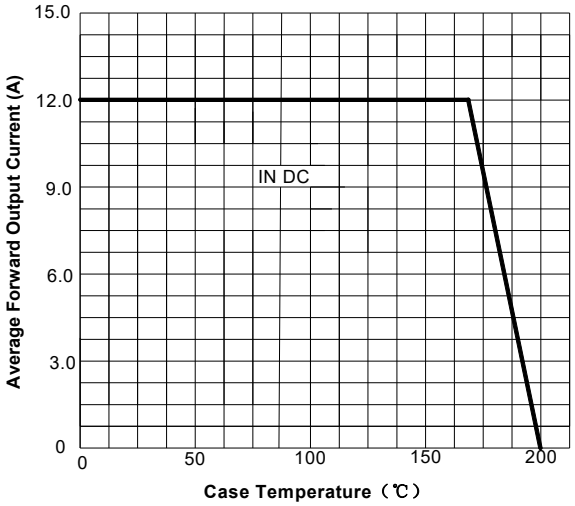



FIG2:Surge Forward Current Capability

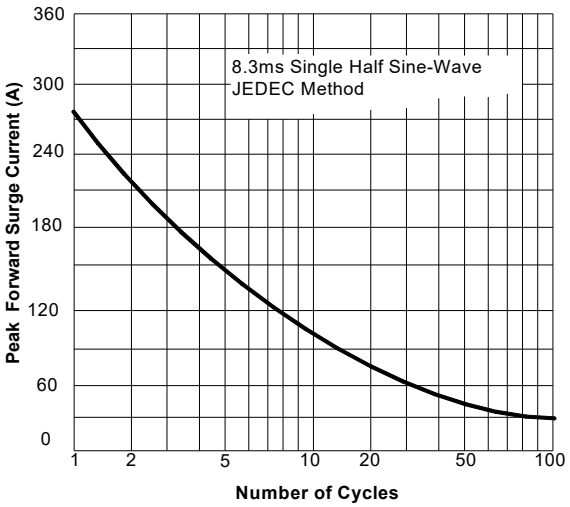



FIG3: Forward Voltage

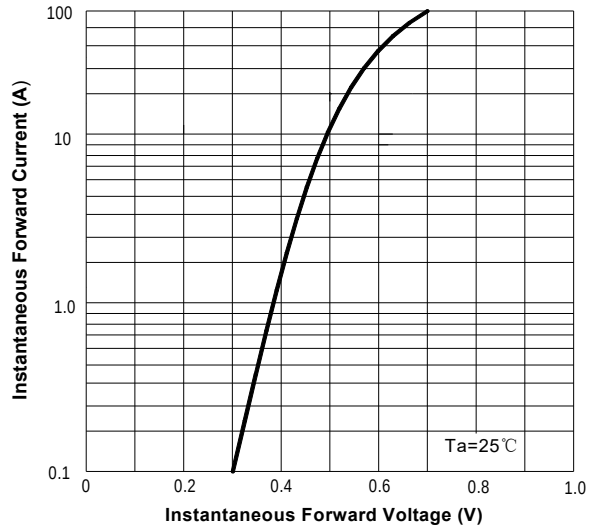
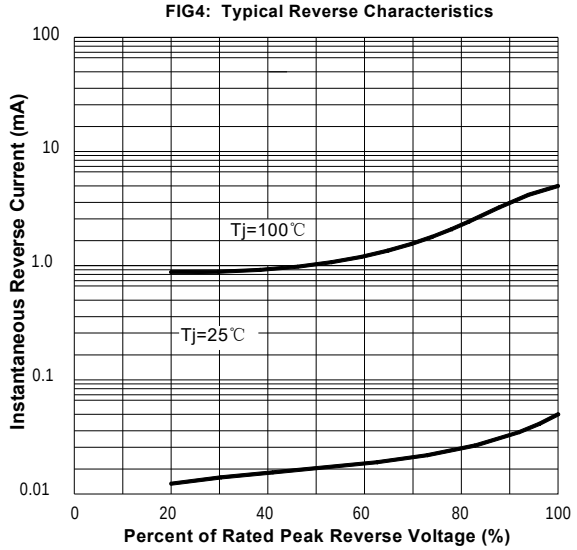
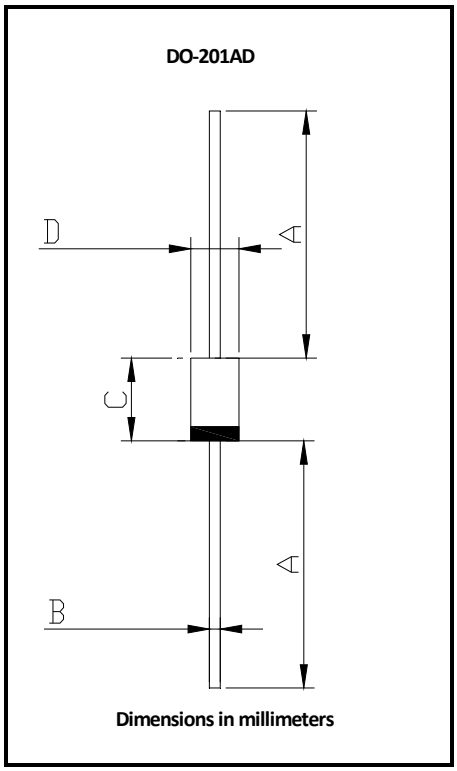



FIG4: Typical Reverse Characteristics



## ■Outline Dimensions




| DO-201AD | | |
|---|---|---|
| Dim | Min | Max |
| A | 26.26 | 26.46 |
| B | 1.212 | 1.228 |
| C | 9.11 | 9.21 |
| D | 5.05 | 5.15 |

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