

SOD-323 Surface Mount Schottky Barrier Rectifier

Features

- $V_R$  40V/30V/20V
- $I_{F(AV)}$  0.35A
- For use in low voltage,high frequency inverters
- Free wheeling,and polanty protection applications

Applications

For use in low voltage high frequency circuit signals.

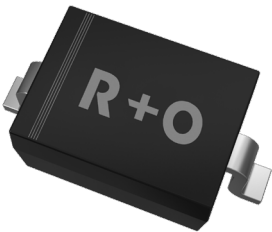
Mechanical Data

- Case: SOD-323  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

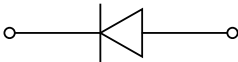
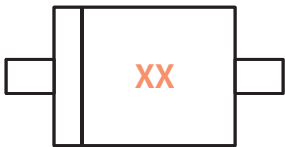
Function Diagram

Reverse Voltage  
40/30/20 V  
Forward Current  
0.35 Ampere

SOD-323



Marking:  
SD103AWS:S4  
SD103BWS:S5  
SD103CWS:S6



Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                            | SYMBOL           | UNIT  | SD103AWS  | SD103BWS | SD103CWS |
|----------------------------------------------------------------------|------------------|-------|-----------|----------|----------|
| Maximum repetitive peak reverse voltage                              | $V_{RRM}$        | V     | 40        | 30       | 20       |
| Maximum RMS Voltage                                                  | $V_{RMS}$        | V     | 28        | 21       | 14       |
| Maximum DC blocking voltage                                          | $V_{DC}$         | V     | 40        | 30       | 20       |
| Maximum Average Forward Rectified Current                            | $I_{F(AV)}$      | mA    | 350       |          |          |
| Non-repetitive Peak Forward Surge Current<br>@t=8.3ms Half-sine wave | $I_{FSM}$        | A     | 1.5       |          |          |
| Power Dissipation                                                    | $P_d$            | mW    | 200       |          |          |
| Storage temperature                                                  | $T_{stg}$        | °C    | -55~+125  |          |          |
| Junction temperature                                                 | $T_j$            | °C    | -55 ~+150 |          |          |
| Typical Thermal Resistance                                           | $R_{\theta J-A}$ | °C /W | 500       |          |          |

# SD103AWS THRU SD103CWS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

| PARAMETER                             | TEST CONDITIONS |                 | SYMBOL | UNIT | SD103AWS | SD103BWS | SD103CWS |
|---------------------------------------|-----------------|-----------------|--------|------|----------|----------|----------|
| Maximum instantaneous forward voltage | If=20mA         |                 | VF1    | V    | 0.37     |          |          |
|                                       | If=200mA        |                 | VF2    |      | 0.60     |          |          |
| Maximum Reverse current               | SD103AWS        | VR=30V,TA=25° C | IR     | μA   | 5.0      |          |          |
|                                       | SD103BWS        | VR=20V,TA=25° C |        |      |          |          |          |
|                                       | SD103CWS        | VR=10V,TA=25° C |        |      |          |          |          |
| Typical junction capacitance          | VR=0V,f=1MHz    |                 | CJ     | pF   | 50       |          |          |

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)

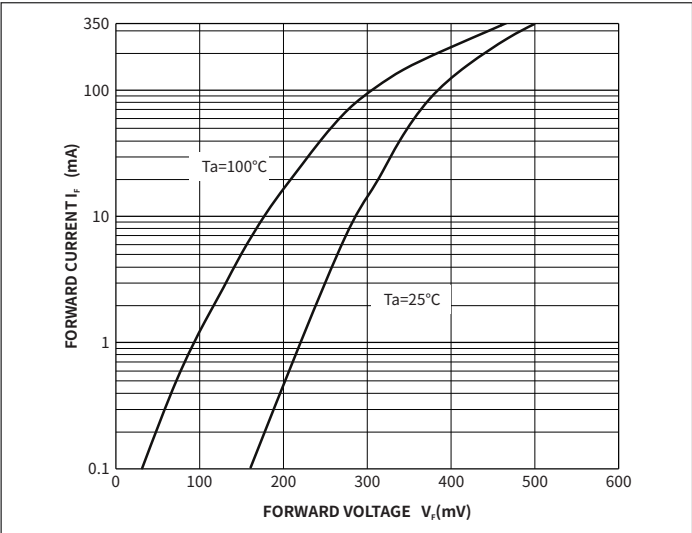


Fig.1 Typical Instaneous Forward Characteristics

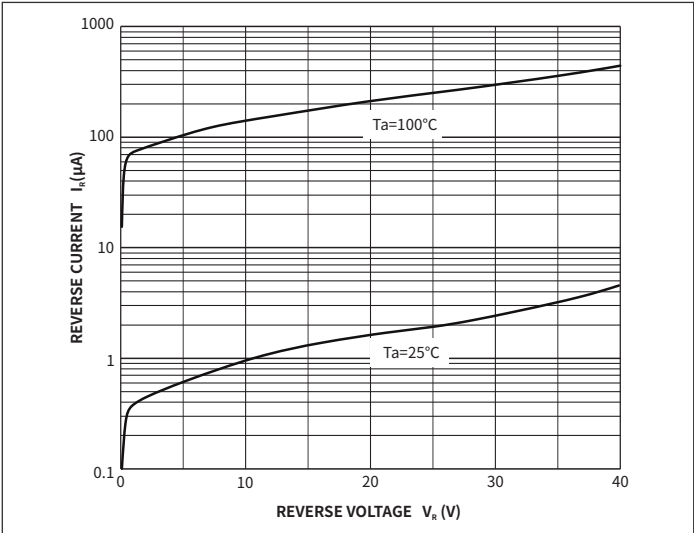


Fig.2 Typical Reverse Characteristics

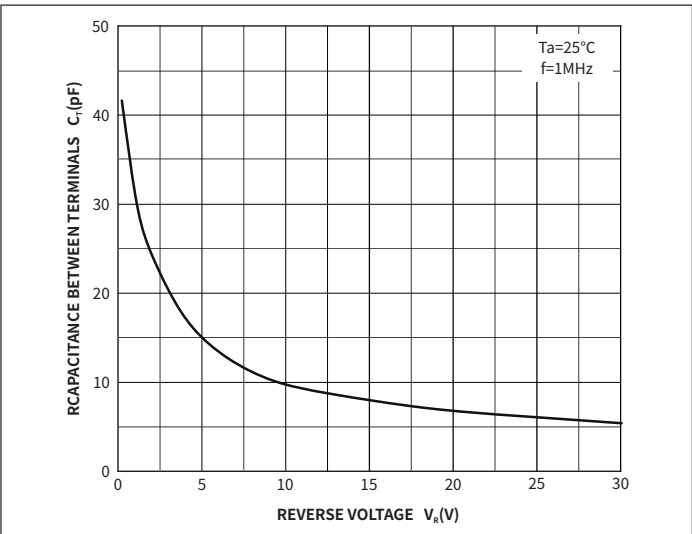


Fig.3 Typical Junction Capacitance

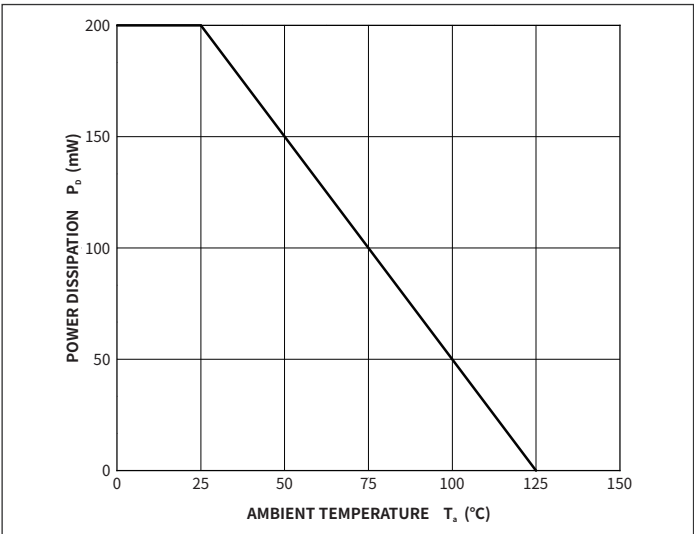


Fig.4 Power Derating Curve

# SD103AWS THRU SD103CWS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

## ● Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-323 | R1           | 0.0048         | 3000      | 30000    | 120000      | 7"            |

## ● Package Outline Dimensions (SOD-323)

| Symbol         | Dimensions  |      |          |       |
|----------------|-------------|------|----------|-------|
|                | Millimeters |      | Inches   |       |
|                | Min.        | Max. | Min.     | Max.  |
| A              | 1.60        | 1.80 | 0.063    | 0.071 |
| B              | 0.25        | 0.40 | 0.010    | 0.016 |
| C              | 2.30        | 2.80 | 0.091    | 0.110 |
| D              | 0.80        | 1.10 | 0.031    | 0.043 |
| D <sub>1</sub> | 0.80        | 0.90 | 0.031    | 0.035 |
| E              | 1.20        | 1.40 | 0.047    | 0.055 |
| F              | 0.08        | 0.18 | 0.003    | 0.007 |
| L              | 0.475REF    |      | 0.019REF |       |
| L <sub>1</sub> | 0.25        | 0.40 | 0.010    | 0.016 |
| H              | -           | 0.14 | -        | 0.006 |

## ● Suggested Pad Layout

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| X      | 0.65        | 0.75 | 0.026  | 0.030 |
| Y      | 0.65        | 0.75 | 0.026  | 0.030 |
| Z      | 2.10        | 2.20 | 0.084  | 0.088 |