

# Schottky barrier diode

## RB551V-30

### ●Applications

High-frequency rectification  
Switching regulators

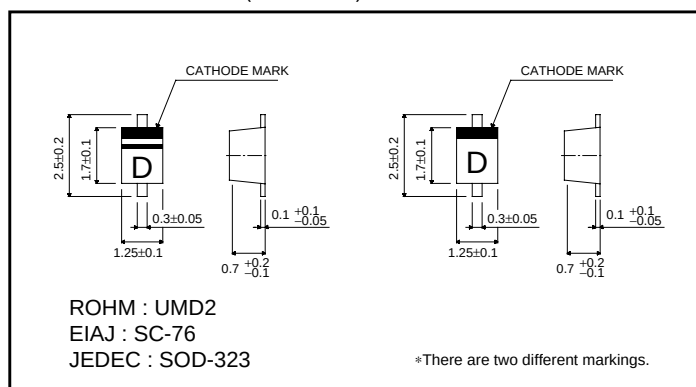
### ●Features

- 1) Small surface mounting type.  
(UMD2)
- 2) Ultra low  $V_F$ .  
( $V_F = 0.41\text{V}$  Typ. at  $0.5\text{A}$ )
- 3) High reliability.

### ●Construction

Silicon epitaxial planar

### ●External dimensions (Units : mm)



### ●Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                   | Symbol    | Limits          | Unit             |
|-----------------------------|-----------|-----------------|------------------|
| Peak reverse voltage        | $V_{RM}$  | 30              | V                |
| DC reverse voltage          | $V_R$     | 20              | V                |
| Mean rectifying current     | $I_O$     | 0.5             | A                |
| Peak forward surge current* | $I_{FSM}$ | 2               | A                |
| Junction temperature        | $T_j$     | 125             | $^\circ\text{C}$ |
| Storage temperature         | $T_{stg}$ | $-40 \sim +125$ | $^\circ\text{C}$ |

\* 60Hz for 1  $\varnothing$

### ●Electrical characteristics ( $T_a = 25^\circ\text{C}$ )

| Parameter       | Symbol   | Min. | Typ. | Max. | Unit          | Conditions           |
|-----------------|----------|------|------|------|---------------|----------------------|
| Forward voltage | $V_{F1}$ | —    | —    | 0.36 | V             | $I_F = 100\text{mA}$ |
|                 | $V_{F2}$ | —    | —    | 0.47 | V             | $I_F = 500\text{mA}$ |
| Reverse current | $I_R$    | —    | —    | 100  | $\mu\text{A}$ | $V_R = 20\text{V}$   |

Diodes

●Electrical characteristic curves (Ta = 25°C)

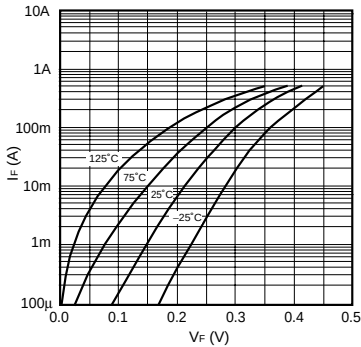


Fig.1 Forward characteristics

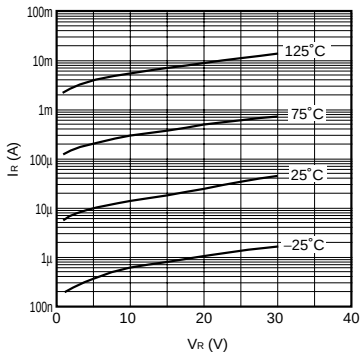


Fig.2 Reverse characteristics

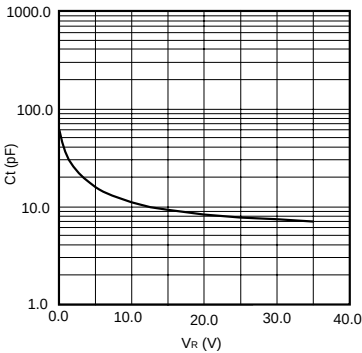


Fig.3 Capacitance between terminals characteristics

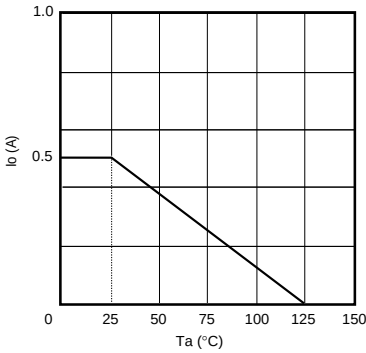


Fig.4 Derating curve