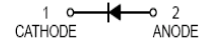




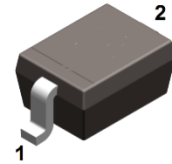
### Features

- High current rectifier schottky diode
- Low voltage
- Low inductance
- For power supply



### Application

- High frequency rectification



### Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

SOD-323

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
RB551V-30	SOD-323	3000 pcs / Tape & Reel	D

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	V
DC Reverse Voltage	V <sub>R</sub>	20	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	0.5	A
Peak Forward Surge Current (8.3ms single half sine-wave)	I <sub>FSM</sub>	2	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Air <sup>*1</sup>	R <sub>θJA</sub>	350	°C/W
Thermal Resistance Junction-to-Case <sup>*1</sup>	R <sub>θJC</sub>	200	°C/W
Thermal Resistance Junction-to-Lead <sup>*1</sup>	R <sub>θJL</sub>	250	°C/W
Operating junction Temperature	T <sub>J</sub>	-40 ~ +100	°C
Storage Temperature Range	T <sub>STG</sub>	-40 ~ +125	°C



# RB551V-30

## Small Signal Schottky Barrier Diode



### Electrical Characteristics (@ T<sub>A</sub> = 25°C unless otherwise specified)

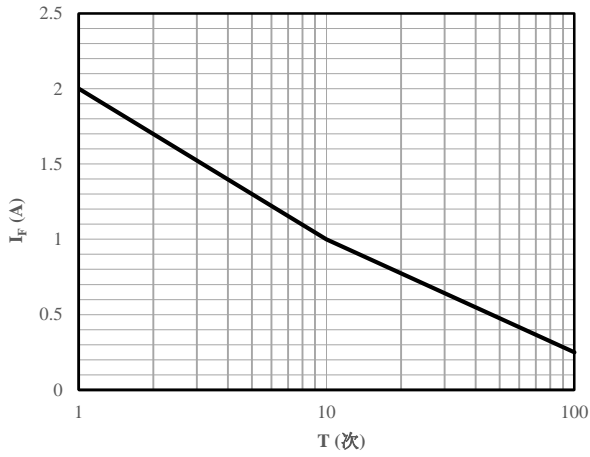
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V <sub>(BR)</sub>	I <sub>R</sub> = 100μA	20	-	-	V
Forward Voltage <sup>*2</sup>	V <sub>F</sub>	I <sub>F</sub> = 100mA	-	-	0.36	V
		I <sub>F</sub> = 500mA	-	-	0.47	V
Maximum Peak Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 20V	-	-	100	μA
Typical Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 0V, f = 1MHZ	-	-	120	pF

Notes:

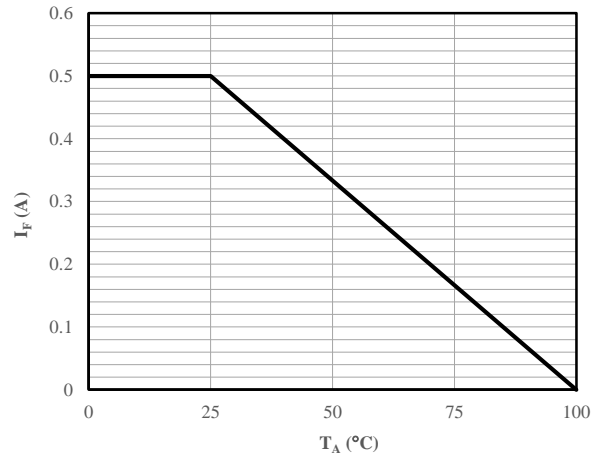
1. The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper
2. The data tested by pulsed, pulse width ≤ 380μs, duty cycle ≤ 2%



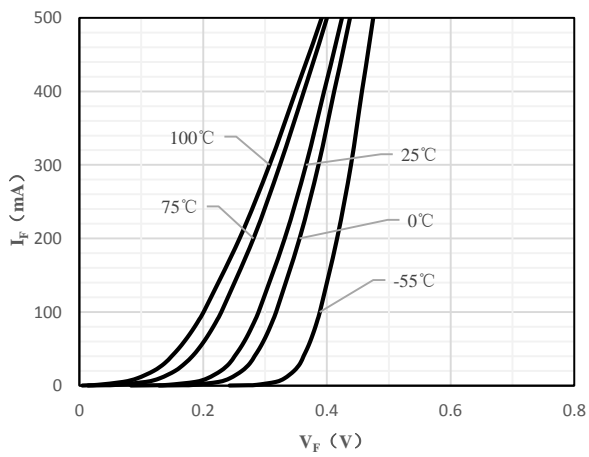
### Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



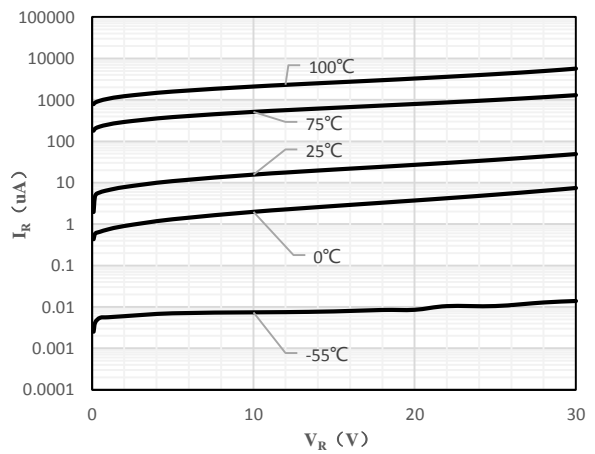
**Fig 1 Peak Forward Surge Current**



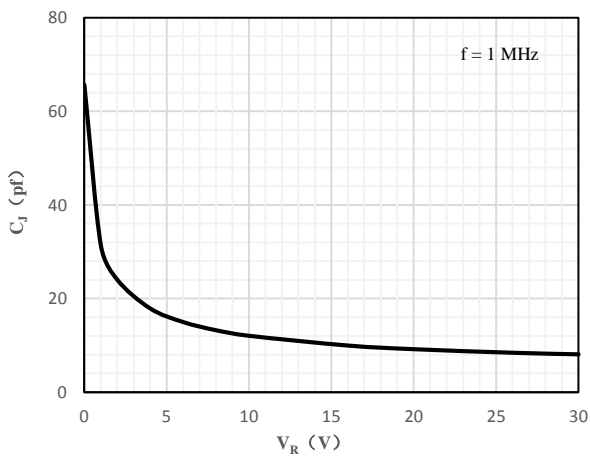
**Fig 2 Current Derating Curve**



**Fig 3 Typical Forward Characteristic**



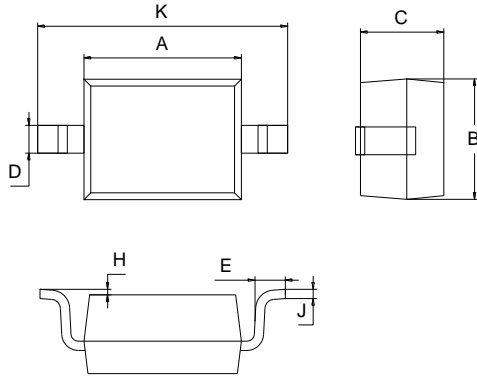
**Fig 4 Typical Reverse Characteristic**



**Fig 5 Typical Junction Capacitance**



## Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

## Mounting Pad Layout (Unit: mm)

### SOD-323

