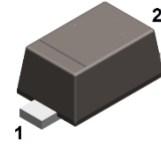


### Features

- Low  $I_R$
- High reliability
- Ultra small mold type
- RoHS compliant with Halogen-free

### Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



**SOD-523**

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
RB531S-30	SOD-523	3000 pcs / Tape & Reel	N

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
DC Blocking Voltage	$V_{DC}$	30	V
Maximum Average Forward Output Current	$I_{F(AV)}$	100	mA
Peak Forward Surge Current (8.3ms single half sine-wave)	$I_{FSM}$	0.5	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	200	mW
Thermal Resistance Junction-to-Air <sup>*1</sup>	$R_{\theta JA}$	300	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case <sup>*1</sup>	$R_{\theta JC}$	200	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead <sup>*1</sup>	$R_{\theta JL}$	220	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-40 ~ +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-40 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 1 inch<sup>2</sup> FR-4 board with 2OZ copper



### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	30	-	-	V
Forward Voltage	$V_F$	$I_F = 10\text{mA}$	-	-	0.35	V
Maximum Peak Reverse Current	$I_R$	$V_R = 10\text{V}$	-	-	10	$\mu\text{A}$

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

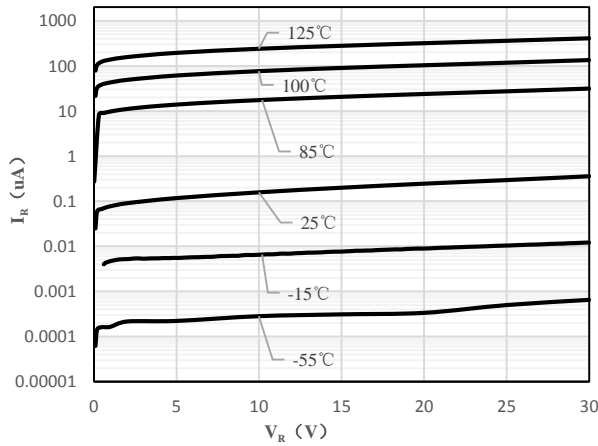


Fig 1 Typical Reverse Characteristic

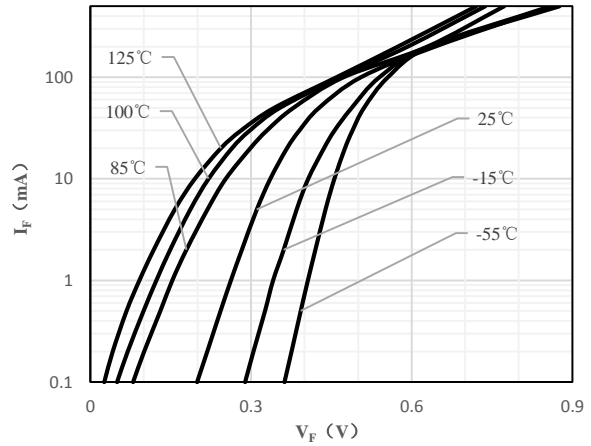


Fig 2 Typical Forward Characteristics

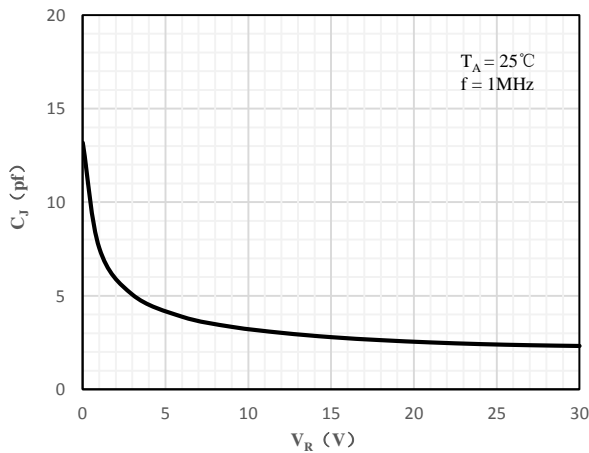


Fig 3 Capacitance Characteristics

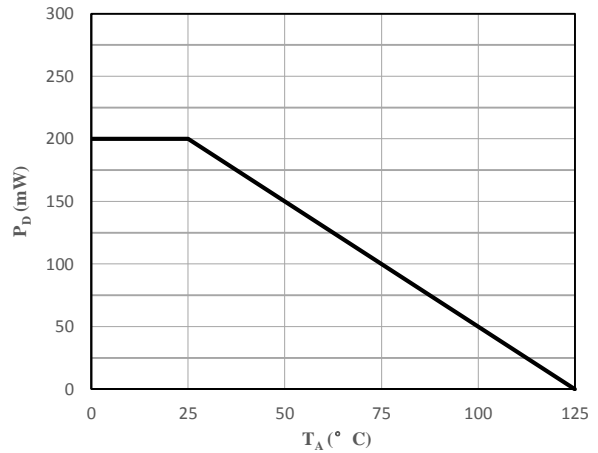
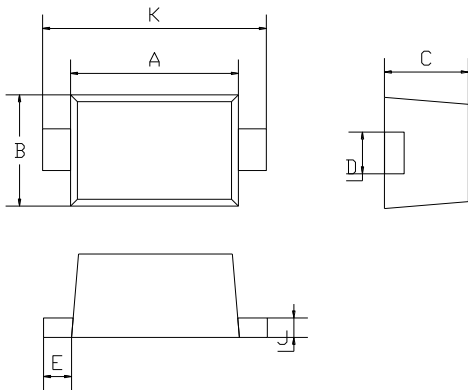


Fig 4 Power Derating Curve



### Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

### Package Outline Dimensions (Unit: mm)

#### SOD-523

