

## Small Signal Schottky Barrier Diode

### Features

- Low reverse current and low forward voltage
- High reliability
- Small surface mounting type



**RB521V-30**  
SOD-323



**RB521S-30**  
SOD-523

### Applications

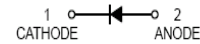
- Low current rectification

### Mechanical Data

- Case: SOD-323, SOD - 523, DFN1006-2
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Tin plated leads, solderable per MIL-STD-202, Method 208



**RB521L-30**  
DFN1006-2



Maximum Ratings (T <sub>A</sub> =25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	V
DC Blocking Voltage	V <sub>DC</sub>	30	V
Maximum Average Forward Output Current	I <sub>F(AV)</sub>	200	mA
Peak Forward Surge Current, 8.3ms Single-Half-sine wave	I <sub>FSM</sub>	1	A

Thermal Characteristics (T <sub>A</sub> =25°C unless otherwise noted)					
Parameter	Symbol	RB521V-30	RB521S-30	RB521L-30	Units
Power Dissipation	P <sub>D</sub>	200	150	100	mW
Typical Thermal Resistance per leg	R <sub>θJA</sub> *	500	667	1000	°C /W
Thermal resistance junction to Lead	R <sub>θJL</sub>	323	658	987	°C /W
Thermal resistance junction to case	R <sub>θJc</sub>	276	421	631	°C /W
Operating Junction Temperature Range	T <sub>J</sub>	-40 to +125			°C
Storage Temperature Range	T <sub>STG</sub>	-40 to +150			°C

\* Part mounted on FR-4 board with recommended pad layout

Electrical Characteristics (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)						
Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Forward Voltage	$V_F^*$	$I_F=200\text{mA}$			0.5	V
Maximum Peak Reverse Current	$I_R^{**}$	$V_R=10\text{V}$			30	$\mu\text{A}$
*Pulse width $\leq 380\ \mu\text{s}$ , Duty cycle $< 2\%$						
**pulse test $t_p \leq 5\text{ms}$						

## Ratings and Characteristics Waveforms

( $T_A = 25^{\circ}\text{C}$  unless otherwise noted)

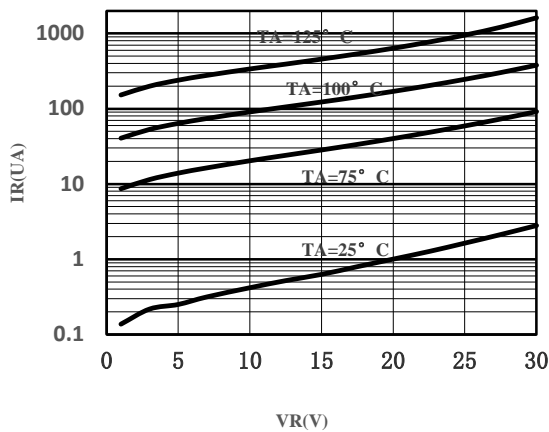


Fig.1- Typical Reverse Characteristic

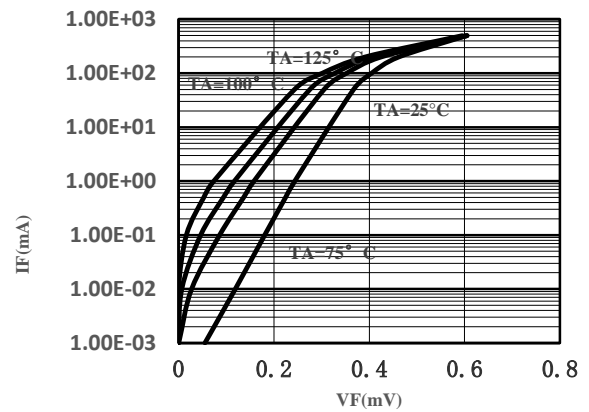


Fig.2- Typical Forward Characteristics

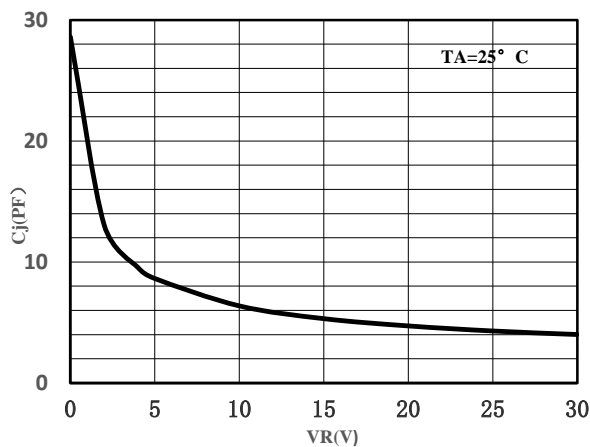


Fig.3-Capacitance Characteristics

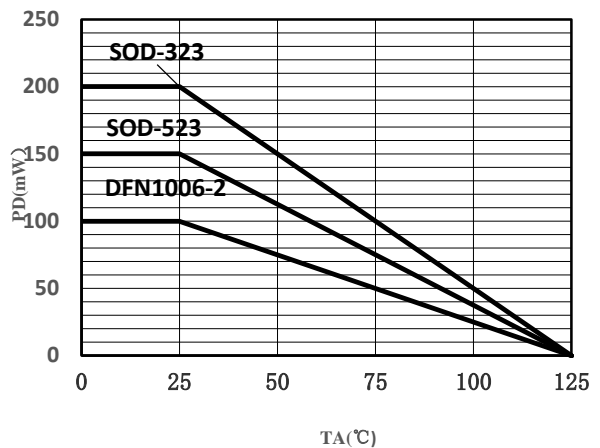
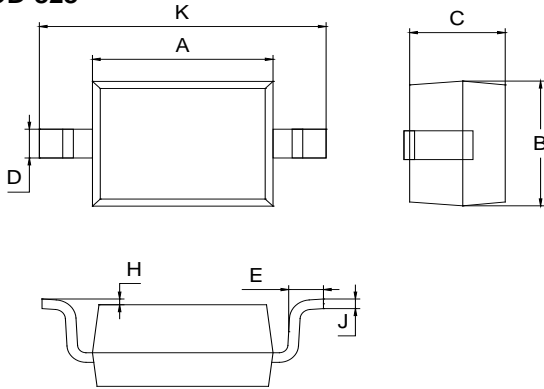


Fig.4-Derating Curve

## Package Outline Dimensions

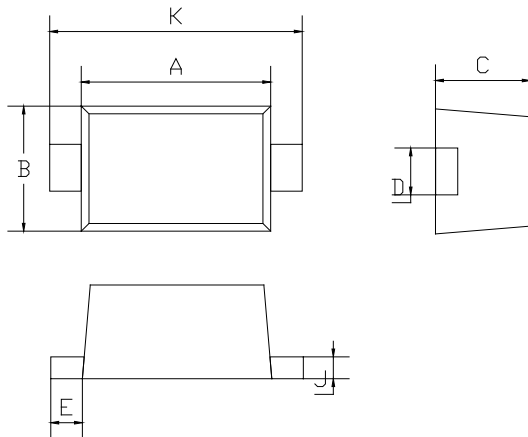
in inches (millimeters)

### SOD-323



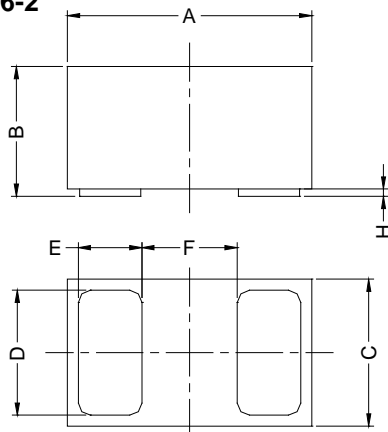
SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

### SOD-523



SOD-523		
Dim	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

### DFN1006-2



DFN1006-2			
Dim	Min	Typ	Max
A	0.95	1.00	1.075
B	0.47	0.50	0.53
C	0.55	0.60	0.675
D	0.45	0.50	0.55
E	0.20	0.25	0.30
F	-	0.40	-
H	0	0.03	0.05

## Revision History

Document Version	Date of release	Discription of changes
Rev.A	2020.03.04	First issue

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