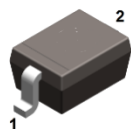


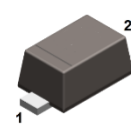


### Features

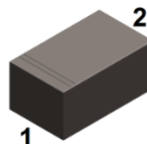
- Low reverse current and low forward voltage
- High reliability
- Small surface mounting type



RB520V-40  
SOD-323



RB520S-40  
SOD-523



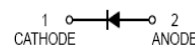
RB520L-40  
DFN1006-2

### Typical 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



### Ordering Information

Part Number	Package	Shipping	Marking Code
RB520V-40	SOD-323	3000 pcs / Tape & Reel	D
RB520S-40	SOD-523	3000 pcs / Tape & Reel	D
RB520L-40	DFN1006-2	10000 pcs / Tape & Reel	D

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

Parameter	Symbol	Value	Units
DC Reverse Voltage	V <sub>RRM</sub>	40	V
Mean Rectifying Current	I <sub>O</sub>	200	mA
Peak Forward Surge Current, 8.3ms Single Half-sine-wave	I <sub>FSM</sub>	1	A

### Thermal Characteristics

Parameter	Symbol	RB520V-40	RB520S-40	RB520L-40	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

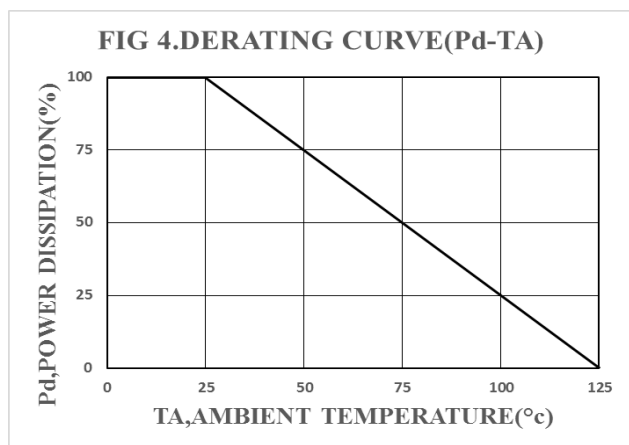
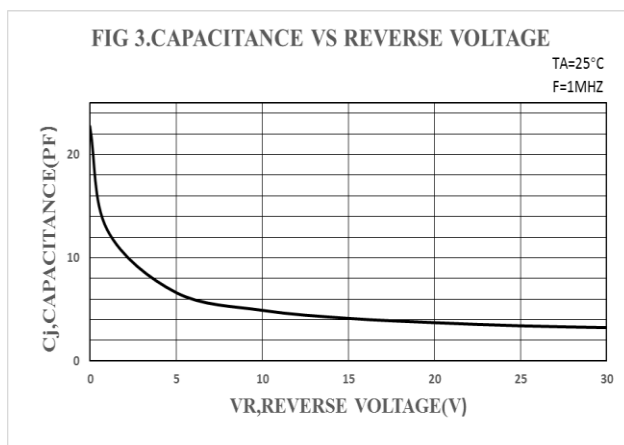
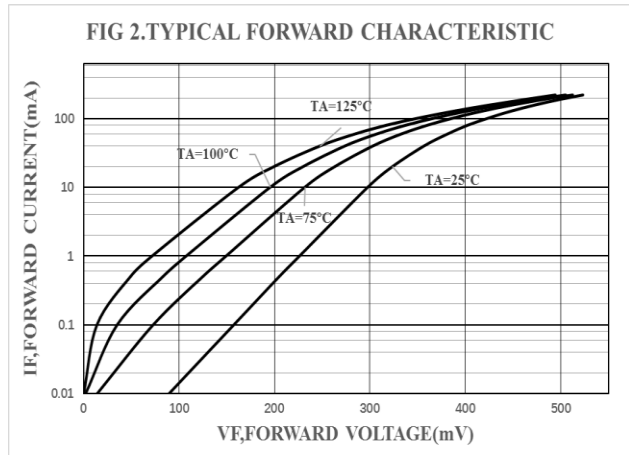
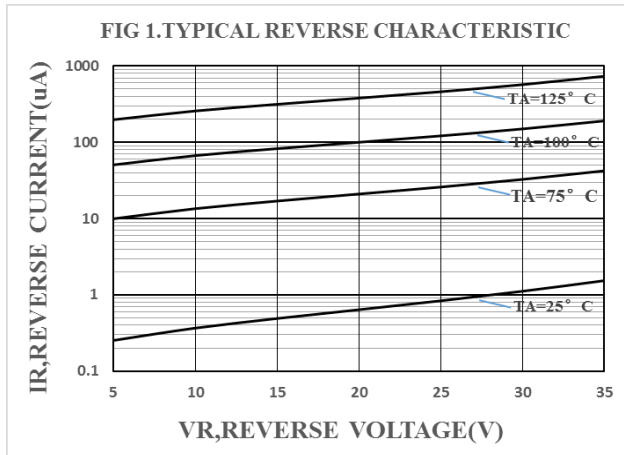


### Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 10\mu\text{A}$	40	-	-	V
Forward Voltage	$V_F^*$	$I_F=10\text{mA}$	-	-	0.39	V
		$I_F=100\text{mA}$	-	-	0.55	V
Reverse Current	$I_R^{**}$	$V_R= 10\text{V}$	-	-	1	$\mu\text{A}$
		$V_R= 40\text{V}$	-	-	10	$\mu\text{A}$
Capacitance between terminals	$C_T$	$V_R=0\text{V}, f=1\text{MHz}$	-	22	50	pF

\*Pulse width  $\leq 380\ \mu\text{s}$ , Duty cycle  $< 2\%$   
 \*\*pulse test ,  $t_p \leq 5\text{ms}$

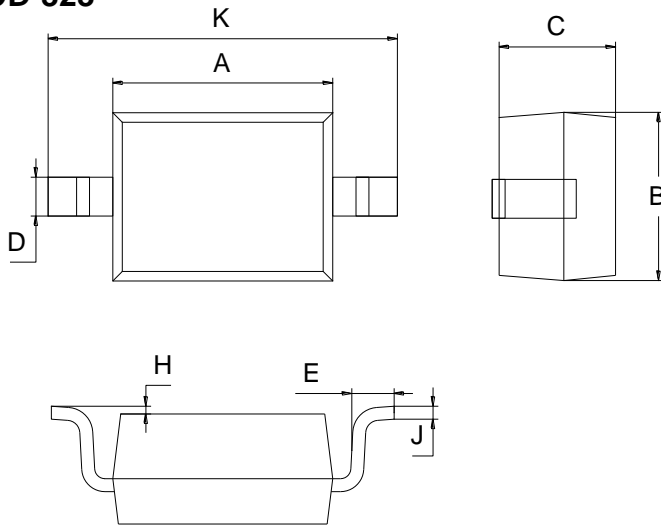
### Ratings and Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)





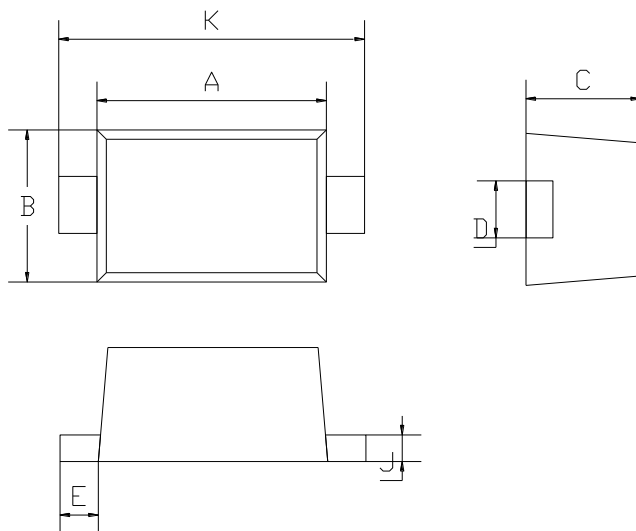
### Package Outline Dimensions (unit: mm)

#### SOD-323



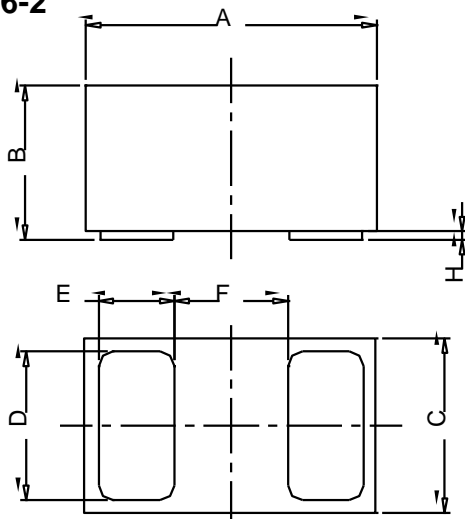
SOD-323		
Dim	Min	Max
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

#### 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

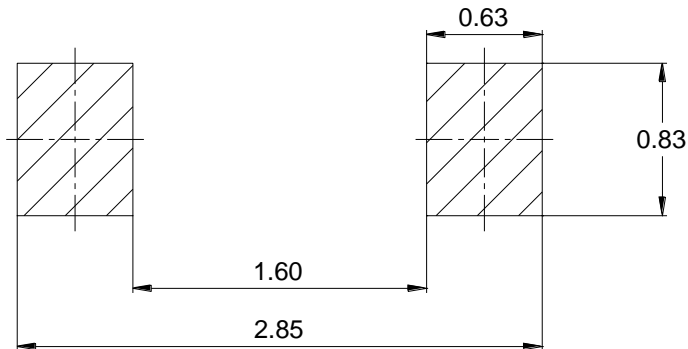


DFN1006-2			
Dim	Min	Typ	Max
A	0.95	1.00	1.075
B	0.47	0.50	0.53
C	0.55	0.60	0.675
D	0.45	0.50	0.55
E	0.20	0.25	0.30
F	-	0.40	-
H	0	0.03	0.05

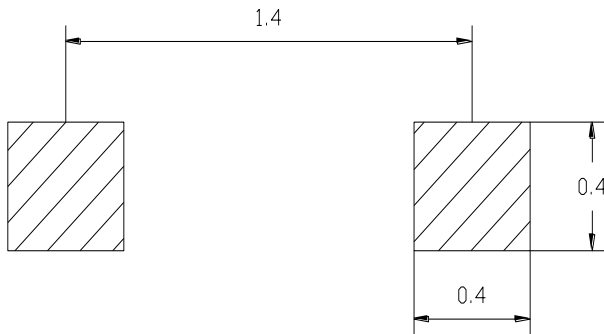


### Mounting Pad Layout (unit: mm)

#### SOD-323



#### SOD-523



#### DFN1006-2

