Small Signal Schottky diode

RB751V-40S2

Description

Planar silicon Schottky barrier diode encapsulated in a SOD-323 plastic SMD package.

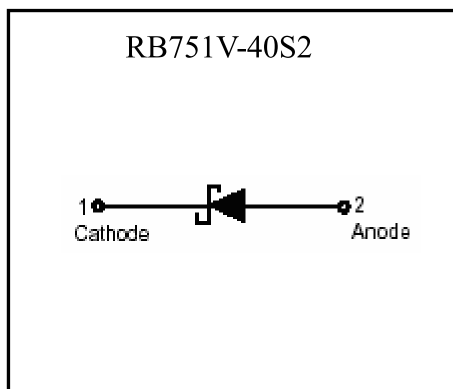
Features

- •Small surface mounting type SC-76/SOD323
- •Low reverse current and low forward voltage
- •High reliability
- •Pb-free lead plating and halogen-free package

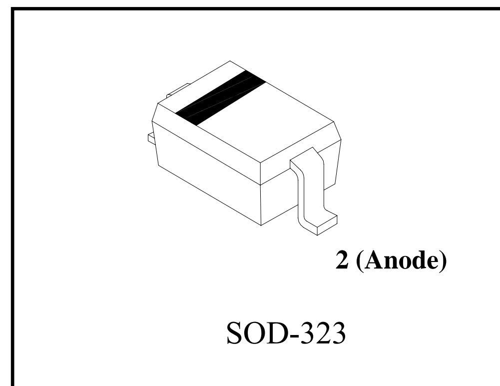
Applications

Low current rectification and high speed switching

Symbol



Outline



Ordering Information

Device	Package	Shipping	Marking
RB751V-40S2-0-T1-G	SOD-323 (Pb-free lead plating and halogen-free package)	3000 pcs / Tape & Reel	5E

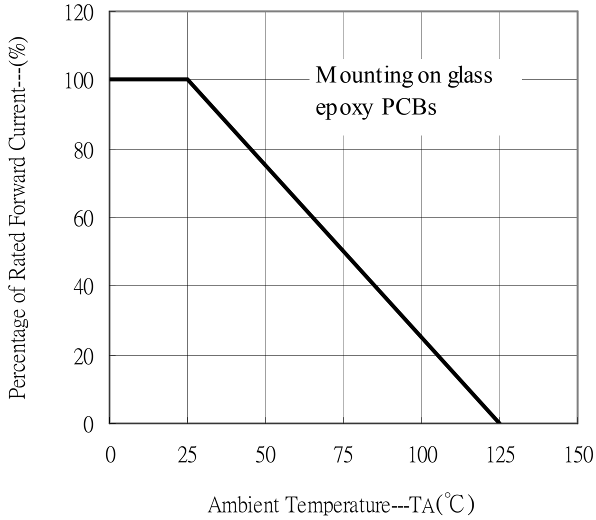
Absolute Maximum Ratings

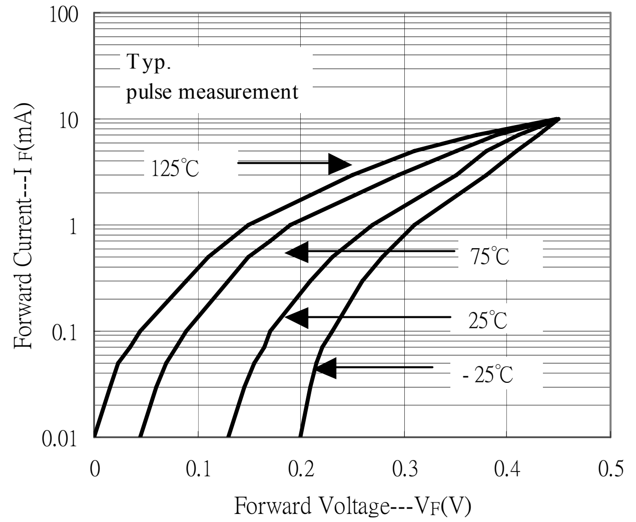
- Maximum Temperatures
  Storage Temperature Tstg.......... -40~+125°C
  Junction Temperature Tj .... +125°C
- Maximum Voltages and Currents (Ta=25°C)
  Peak Reverse Voltage V_{RM}.......... 40 V
  DC Reverse Voltage V_R .... 30 V
  Mean Rectifying Current I_O.......... 30 mA
  Peak Forward Surge Current I_{FSM}..........200 mA

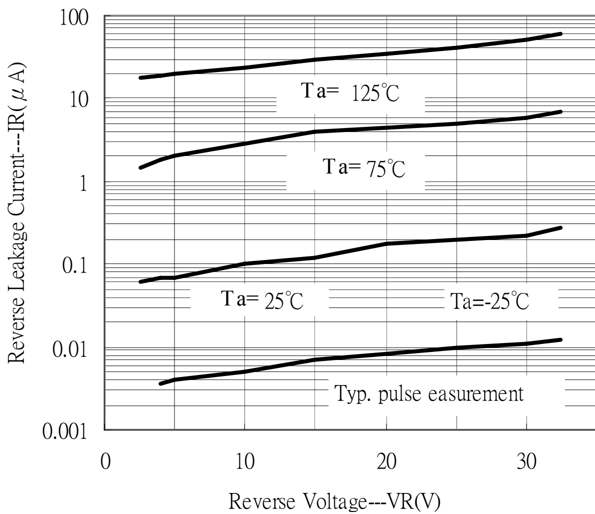
Characteristics (Ta=25°C)

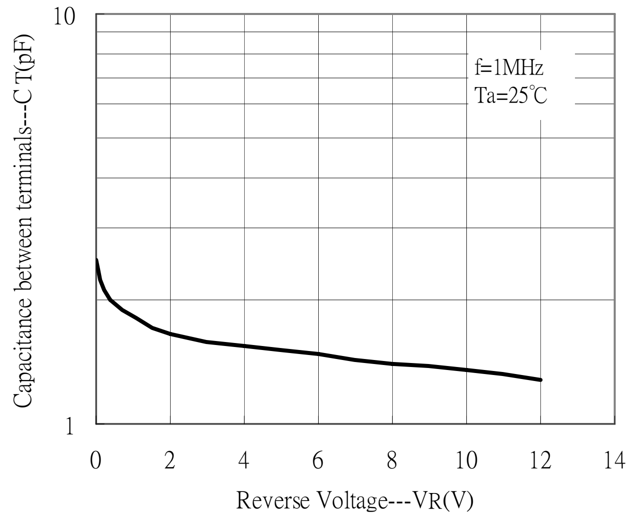
Characteristic	Symbol	Condition	Min.	Typ	Max.	Unit
Forward Voltage	V_F	I_F=1mA	-	-	370	mV
Reverse Leakage Current	I_R	V_R=30V	-	-	0.5	μA
Capacitance Between Terminals	C_T	V_R=1V, f=1MHz	-	2	-	pF

Characteristic Curves

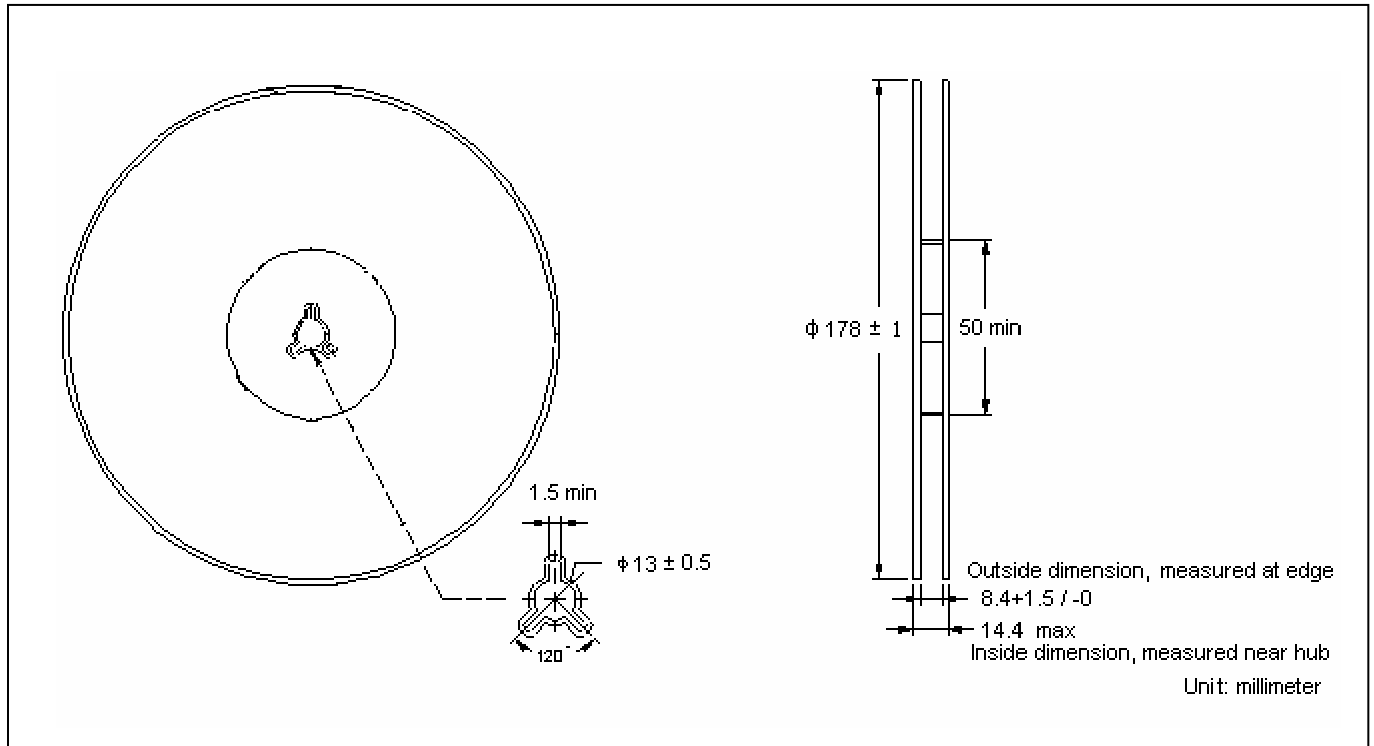




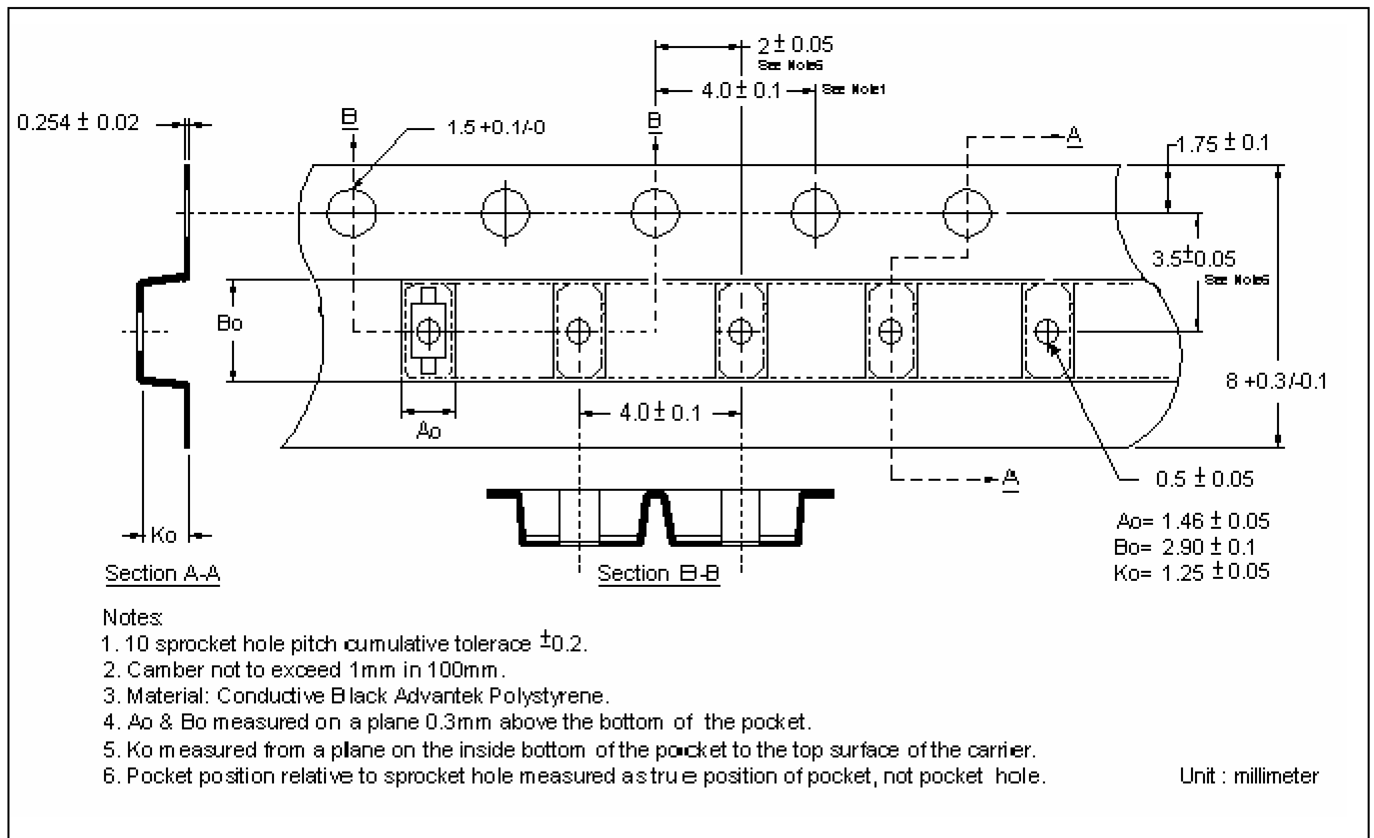




Reel Dimension



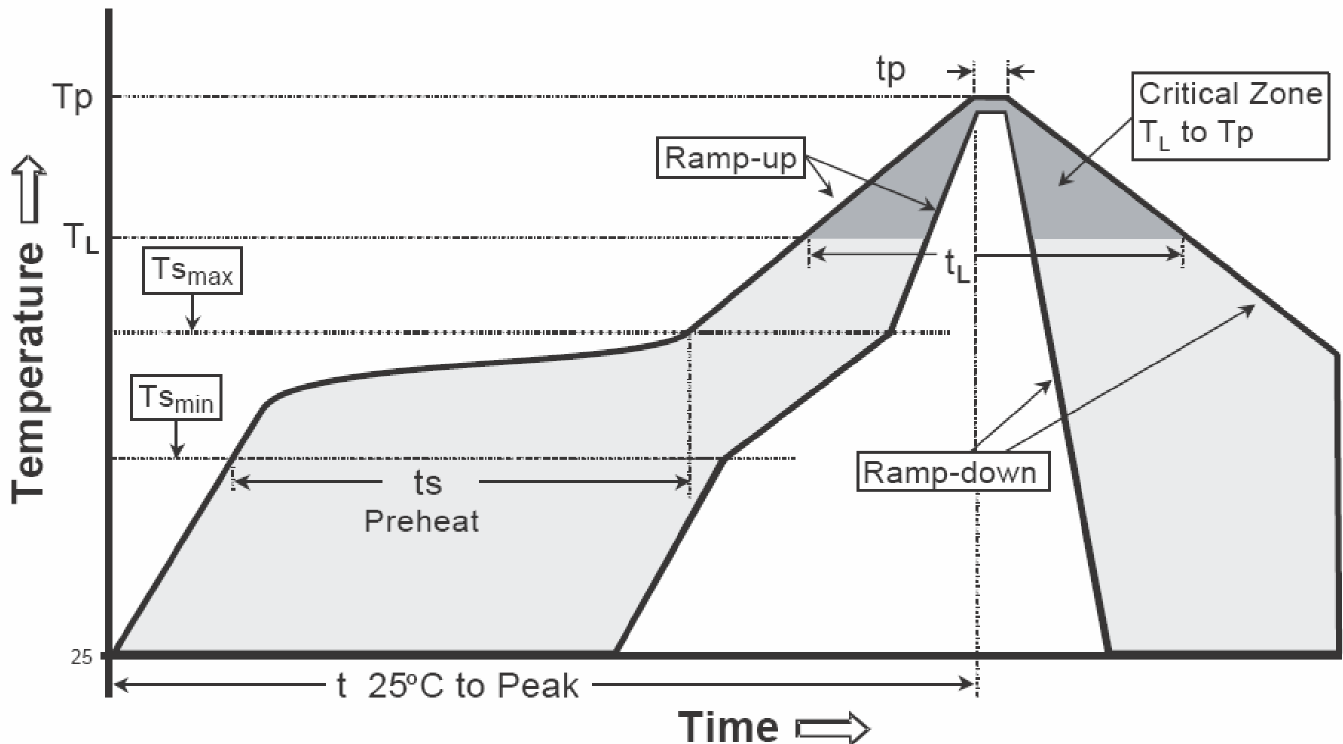
Carrier Tape Dimension



Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

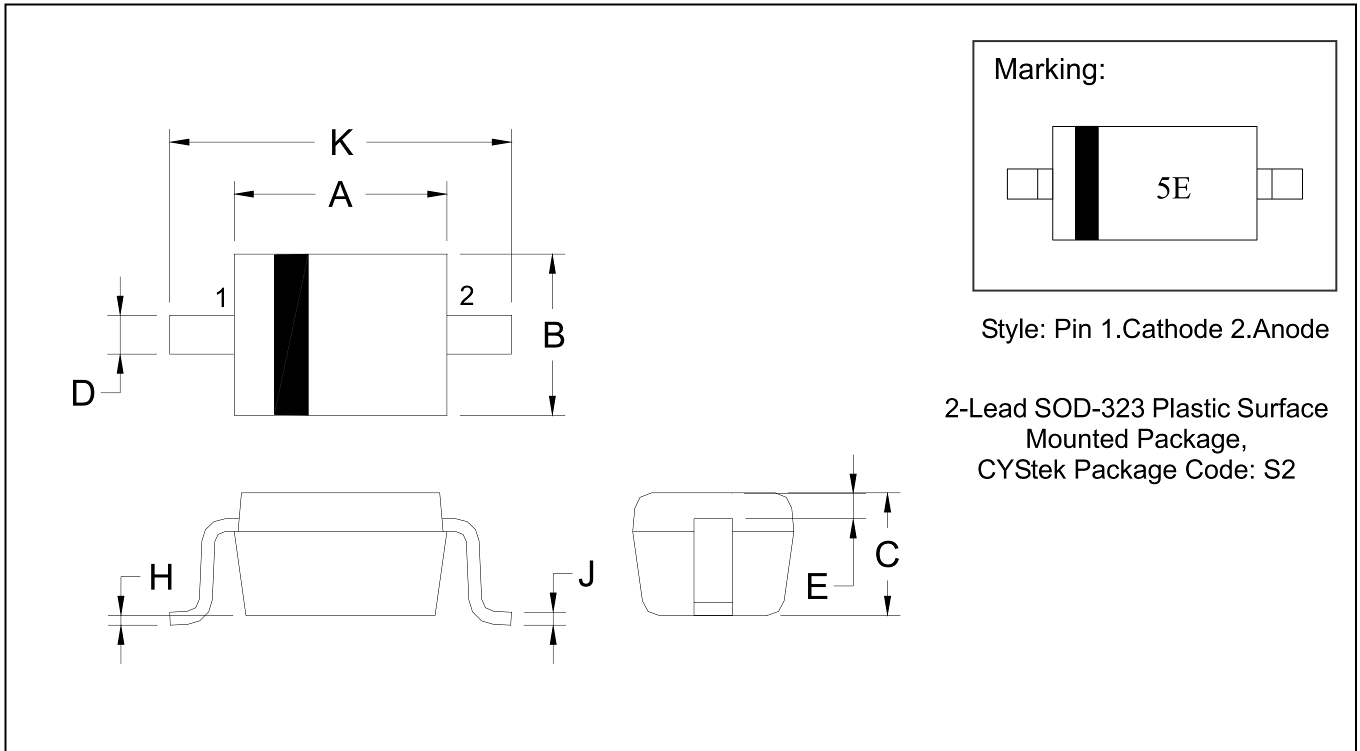
Recommended temperature profile for IR reflow



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(Ts min) −Temperature Max(Ts max) −Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: −Temperature (TL) − Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

SOD-323 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0630	0.0709	1.60	1.80	E	0.0060 REF		0.15 REF	
B	0.0453	0.0531	1.15	1.35	H	0.0000	0.0040	0.00	0.10
C	0.0315	0.0394	0.80	1.00	J	0.0035	0.0070	0.089	0.177
D	0.0098	0.0157	0.25	0.40	K	0.0906	0.1063	2.30	2.70

Notes: 1.Controlling dimension : millimeters.
2.Lead thickness specified per L/F drawing with solder plating.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

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