

### Small Signal Diode



#### Features

- ✧ Low power loss, high current capability, low  $V_F$
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

#### Mechanical Data

- ✧ Case : SOD-323 small outline plastic package
- ✧ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Polarity : Indicated by cathode band
- ✧ Weight : 0.004 gram (approximately)
- ✧ Marking Code : 5

#### Ordering Information

Package	Part No.	Packing	Marking
SOD-323	RB751V-40 RR	3K / 7" Reel	5
SOD-323	RB751V-40 RRG	3K / 7" Reel	5

#### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

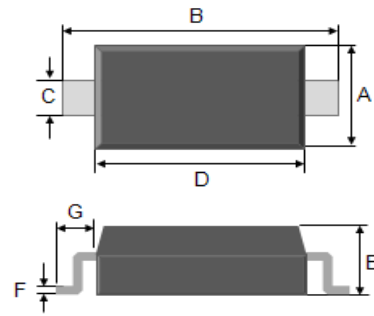
##### Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	$P_D$	200	mW
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Reverse Voltage	$V_R$	30	V
Mean Forward Current @ $T_L=100^\circ\text{C}$ (Lead Temperature)	$I_o$	30	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	$I_{FSM}$	0.2	A
Thermal Resistance (Junction to Ambient) (Note 2)	$R\theta_{JA}$	500	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-45~125	$^\circ\text{C}$

Notes:1. Test Condition : 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)

Notes:2. Valid provided that electrodes are kept at ambient temperature

SOD-323

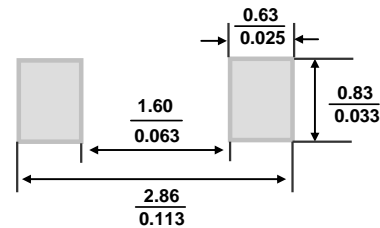


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.20	1.40	0.047	0.055
B	2.50	2.80	0.098	0.106
C	0.25	0.35	0.010	0.014
D	1.60	1.80	0.063	0.071
E	0.80	0.90	0.031	0.035
F	0.08	0.15	0.003	0.006
G	0.475 REF		0.19 REF	

#### Pin Configuration

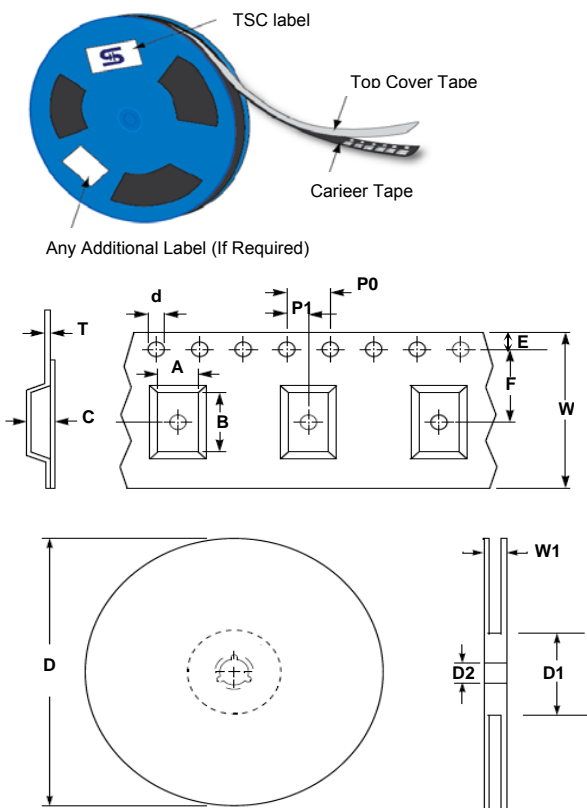


#### Suggested PAD Layout

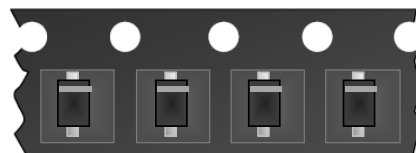


**Small Signal Diode**
**Electrical Characteristics**

Type Number		Symbol	Min	Max	Units
Forward Voltage	$I_F = 1.0\text{mA}$	$V_F$	-	0.37	V
Reverse Leakage Current	$V_R = 30\text{V}$	$I_R$	-	0.5	$\mu\text{A}$
Junction Capacitance	$V_R = 0\text{V}, f = 1.0\text{MHz}$	$C_J$	2		pF

**Tape & Reel specification**


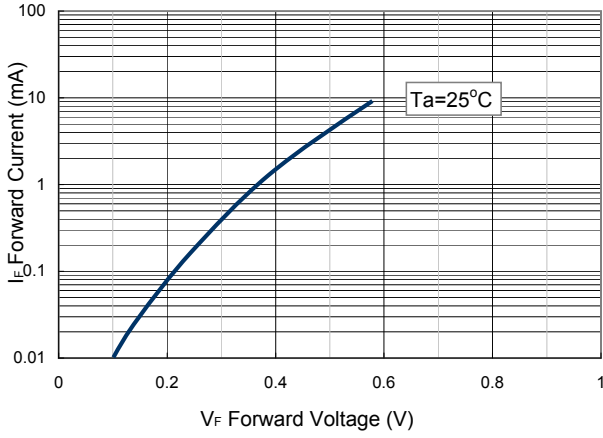
Item	Symbol	Dimension(mm)
Carrier width	A	$1.7 \pm 0.10$
Carrier length	B	$3.73 \pm 0.10$
Carrier depth	C	$1.68 \pm 0.10$
Sprocket hole	d	$1.5 \pm 0.1$
Reel outside diameter	D	$178 \pm 1$
Reel inner diameter	D1	55 Min
Feed hole width	D2	$13.0 \pm 0.20$
Sprocket hole position	E	$1.75 \pm 0.10$
Punch hole position	F	$3.50 \pm 0.05$
Sprocket hole pitch	P0	$4.00 \pm 0.10$
Embossment center	P1	$2.00 \pm 0.05$
Overall tape thickness	T	$0.23 \pm 0.05$
Tape width	W	$8.00 \pm 0.20$
Reel width	W1	14.4 Max



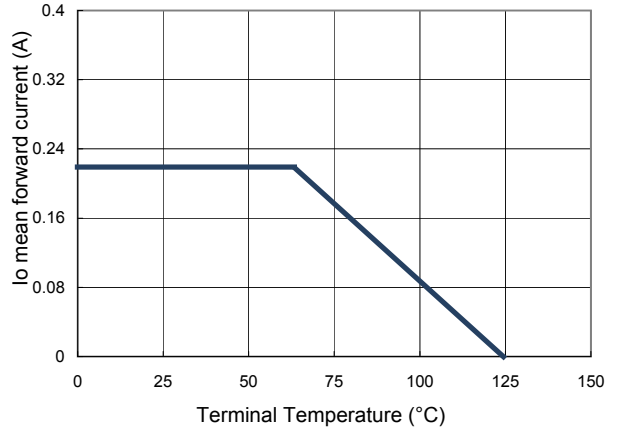
**Small Signal Diode**

**Rating and Sharacteristic Curves**

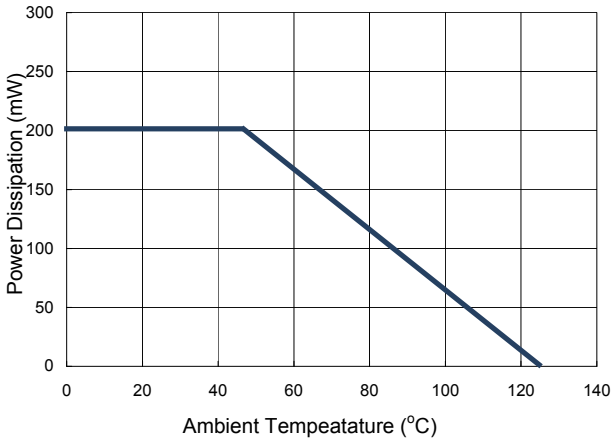
**FIG 1 Typical Forward Characteristics**



**FIG 2 Forward Current Derating Curve**



**FIG 3 Admissible Power Dissipation Curve**



**FIG 4 Typical Junction Capacitance**

