

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.

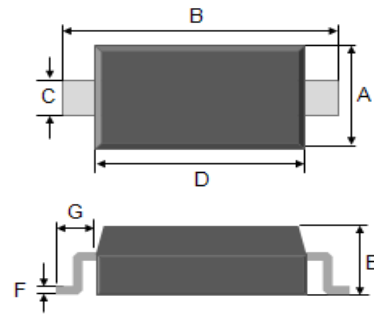
Maximum Ratings

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

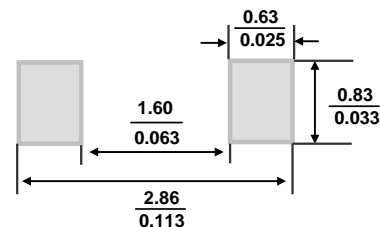


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.20	1.40	0.047	0.055
B	2.50	2.80	0.098	0.106
C	0.25	0.35	0.010	0.014
D	1.60	1.80	0.063	0.071
E	0.80	0.90	0.031	0.035
F	0.08	0.15	0.003	0.006
G	0.475 REF		0.19 REF	

Pin Configuration

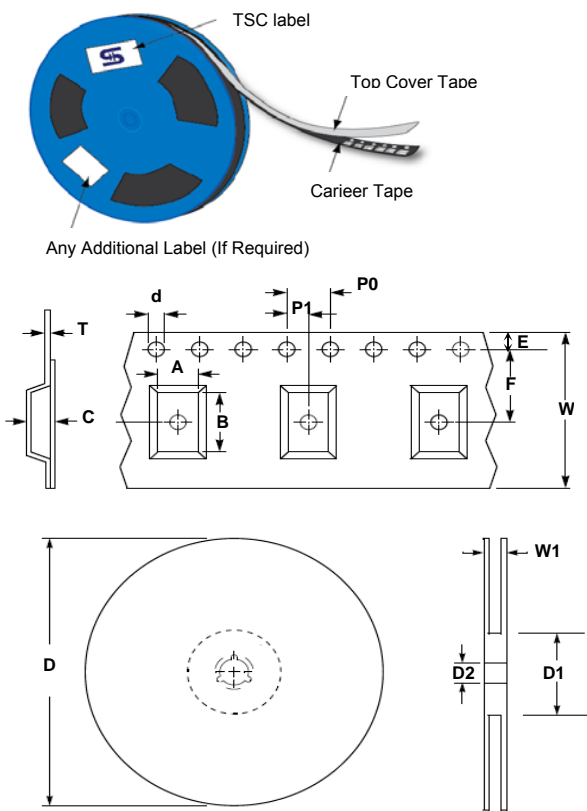


Suggested PAD Layout



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

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Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

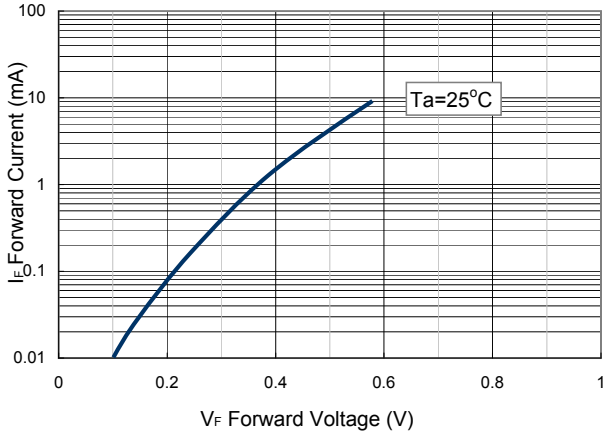


FIG 2 Forward Current Derating Curve

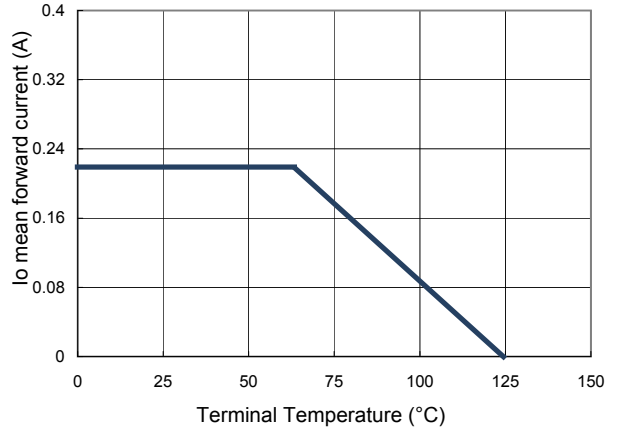


FIG 3 Admissible Power Dissipation Curve

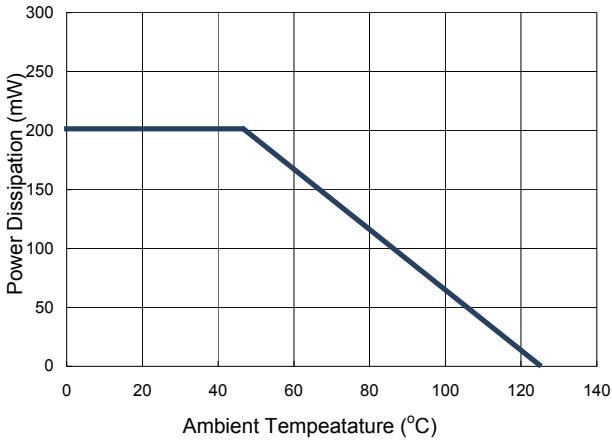


FIG 4 Typical Junction Capacitance

