

## 200mW, 0.37V Schottky Barrier Diode

### FEATURES

- Designed for mounting on small surface
- Low Capacitance
- Low forward voltage drop
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- Adapters
- For switching power supply
- Low stored charge
- Inverter

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	30	mA
$V_{RRM}$	40	V
$I_{FSM}$	0.2	A
$V_F$ at $I_F=1mA$	0.37	V
$T_J$ Max.	125	°C
Package	SOD-323	
Configuration	Single dice	

### MECHANICAL DATA

- Case: SOD-323
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte Au plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 0.004grams (approximately)



ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	PART NUMBER	UNIT
Marking code on the device		5	
Repetitive peak reverse voltage	$V_{RRM}$	40	V
Forward current	$I_{F(AV)}$	30	mA
Non-repetitive peak forward surge current @ $t = 8.3ms$	$I_{FSM}$	0.2	A
Junction temperature range	$T_J$	-45 to +125	°C
Storage temperature range	$T_{STG}$	-45 to +125	°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	500	°C/W

**Notes:**

1. Valid provided that terminals are kept at ambient temperature

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 1\text{mA}, T_J = 25^\circ\text{C}$	$V_F$	--	0.37	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$V_R = 30\text{V}, T_J = 25^\circ\text{C}$	$I_R$	--	0.5	$\mu\text{A}$
Junction capacitance	1 MHz, $V_R = 0\text{V}$	$C_J$		2	$\text{pF}$

**Notes:**

1. Pulse test with  $PW = 0.3\text{ ms}$
2. Pulse test with  $PW = 30\text{ ms}$

<b>ORDERING INFORMATION</b>				
<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>PACKAGE</b>	<b>PACKING</b>
RB751V-40 (Note 1)	RR	G	SOD-323	3K / 7" Reel

**Notes:**

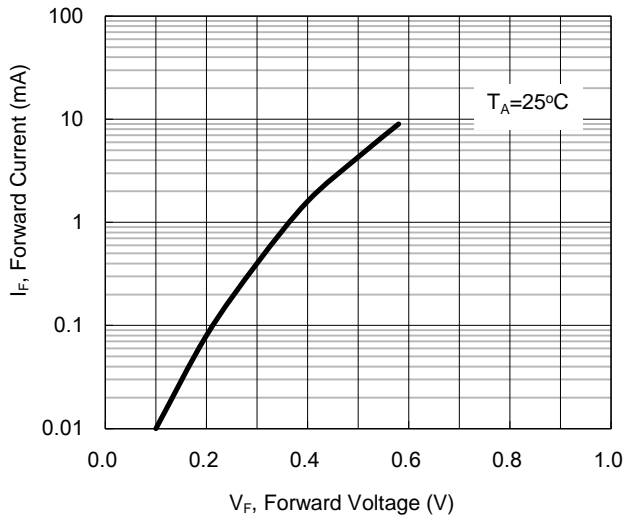
1. Whole series with green compound

<b>EXAMPLE</b>				
<b>EXAMPLE P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
RB751V-40 RRG	RB751V-40	RR	G	Green compound

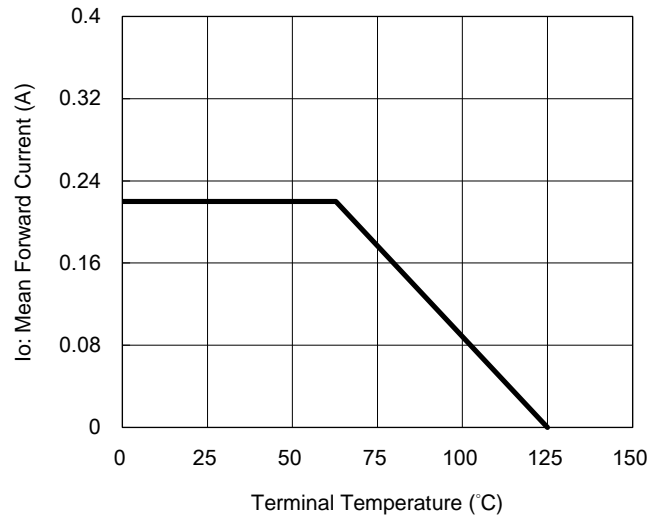
**CHARACTERISTICS CURVES**

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

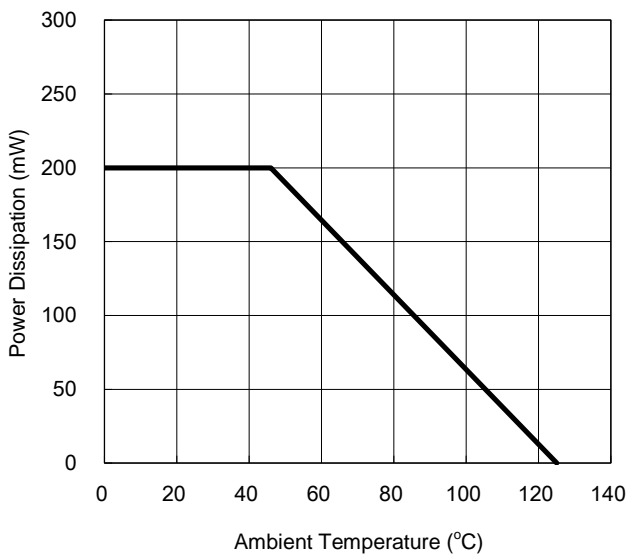
**Fig.1 Typical Forward Characteristics**



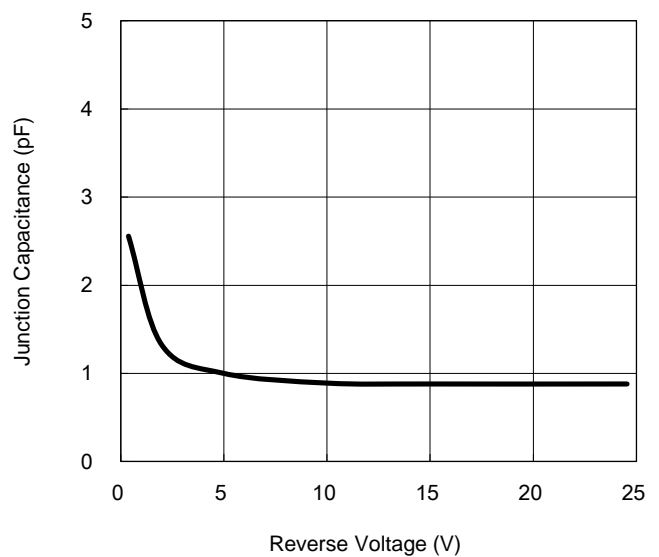
**Fig.2 Forward Current Derating Curve**



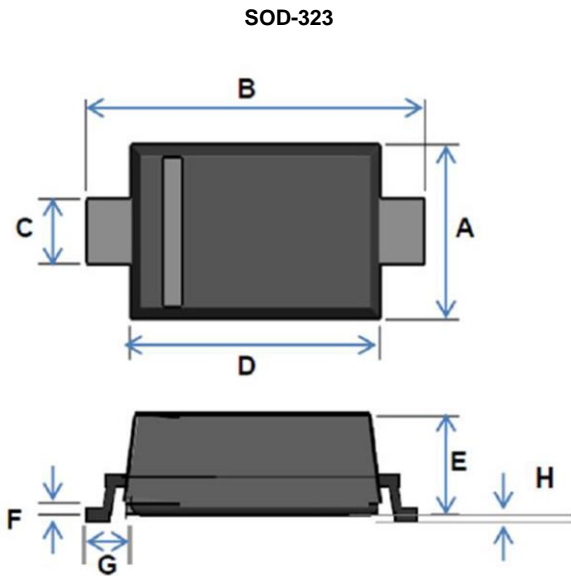
**Fig.3 Admissible Power Dissipation Curve**



**Fig.4 Typical Junction Capacitance**

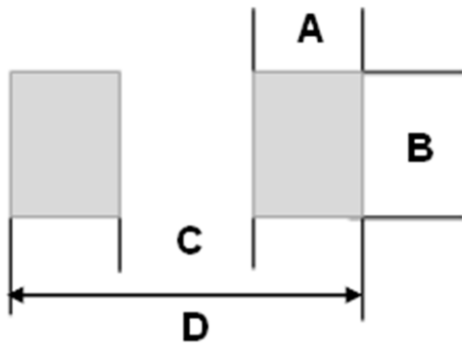


**PACKAGE OUTLINE DIMENSION**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.150	1.400	0.045	0.055
B	2.300	2.700	0.091	0.106
C	0.250	0.450	0.010	0.018
D	1.600	1.800	0.063	0.071
E	0.800	1.000	0.031	0.039
F	0.050	0.177	0.002	0.007
G	0.475 REF		0.019 REF	
H	--	0.100	--	0.004

**SUGGEST PAD LAYOUT**



DIM.	Unit(mm)	Unit(inch)
	Typ.	Typ.
A	0.63	0.025
B	0.83	0.033
C	1.60	0.063
D	2.86	0.113

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