

Schottky Barrier Diodes

RB751S40

Features

- Low Forward Voltage Drop
- Fast Switching
- Very Small and Thin SMD Package
- Profile Height, 0.43 mm Max
- Footprint, 1.0 x 0.6 mm

ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	30	V
Average Rectified Forward Current	$I_{F(AV)}$	30	mA
Forward Surge Current (8.3 mS Single Half Sine-Wave)	I_{FSM}	200	mA
Power Dissipation	P_D	227	mW
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	°C

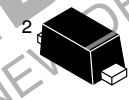
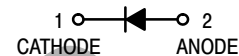
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



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CONNECTION DIAGRAM



SOD-923
CASE 514AB

MARKING DIAGRAM



AD = Specific Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
RB751S40P2T5G	SOD-923 (Pb-Free)	8000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	550	$^{\circ}\text{C}/\text{W}$

1. Minimum land pad.

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

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Breakdown Voltage	V_R	$I_R = 10\ \mu\text{A}$	30	–	V
Forward Voltage	V_F	$I_F = 1\ \text{mA}$	–	370	mV
Reverse Leakage	I_R	$V_R = 30\ \text{V}$	–	0.5	μA
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\ \text{mA}$, $i_{rr} = 0.1\ I_R$	–	8.0	nS
Junction Capacitance	C_j	$V_R = 1\ \text{V}$, $f = 1.0\ \text{MHz}$	–	2.5	pF

TYPICAL PERFORMANCE CHARACTERISTICS

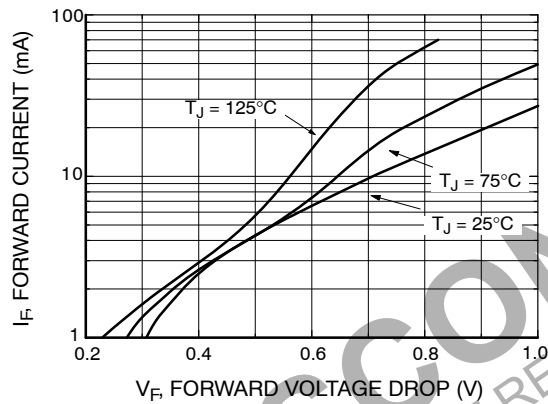


Figure 1. Forward Current Characteristics

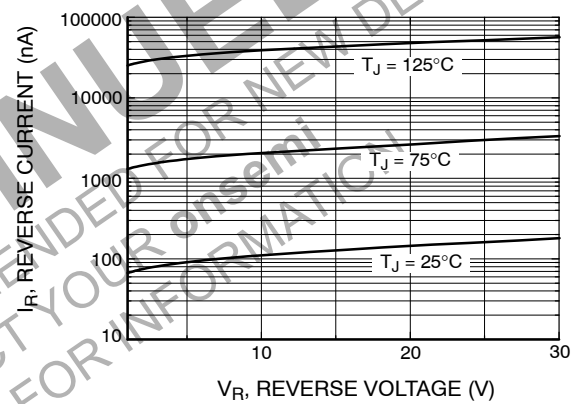


Figure 2. Reverse Leakage Current

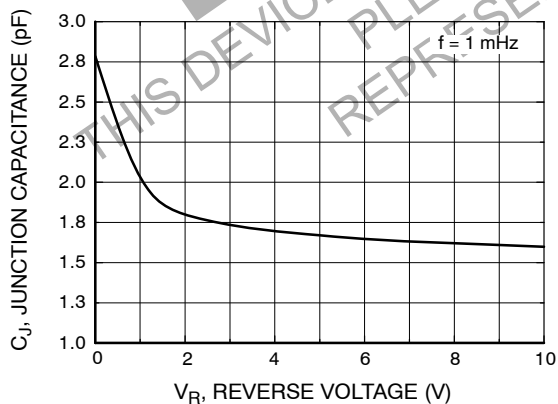


Figure 3. Junction Capacitance

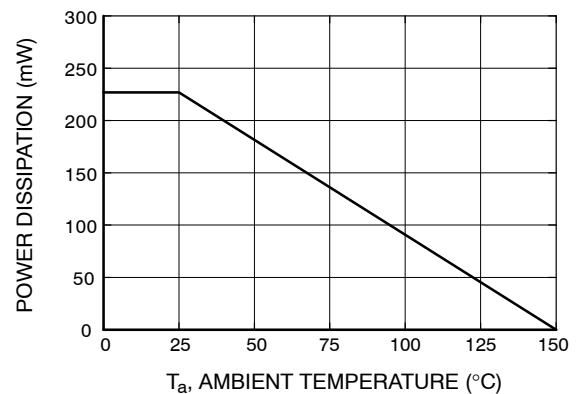
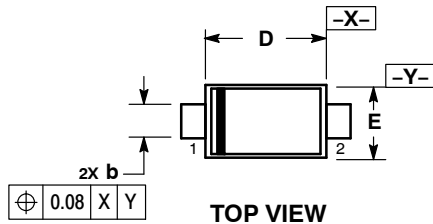


Figure 4. Power Derating

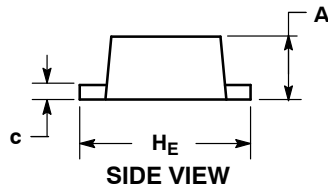
RB751S40

PACKAGE DIMENSIONS

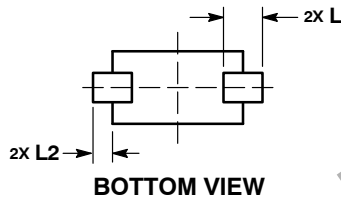
SOD-923
CASE 514AB
ISSUE C



TOP VIEW



SIDE VIEW



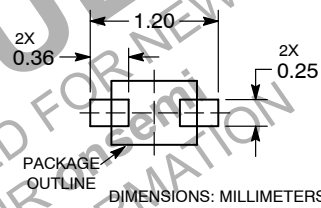
BOTTOM VIEW

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.


DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H _E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.19 REF			0.007 REF		
L2	0.05	0.10	0.15	0.002	0.004	0.006

SOLDERING FOOTPRINT*



See Application Note AND8455/D for more mounting details

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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