

RB751V40T1

Schottky Barrier Diode

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

- Extremely Fast Switching Speed
- Extremely Low Forward Voltage – 0.28 Volts (Typ) @ $I_F = 1 \text{ mAdc}$
- Low Reverse Current

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	40	V
Reverse Voltage	V_R	30	Vdc
Electrostatic Discharge	E_{SD}	HBM Class: 1C MM Class: A	

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR–5 Board, (Note 1.) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200	mW
		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	–55 to +150	$^\circ\text{C}$

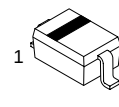
1. FR–5 Minimum Pad



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40 V SCHOTTKY BARRIER DIODE



SOD–323
CASE 477
PLASTIC

MARKING DIAGRAMS



5E = Specific Device Code
M = Date Code

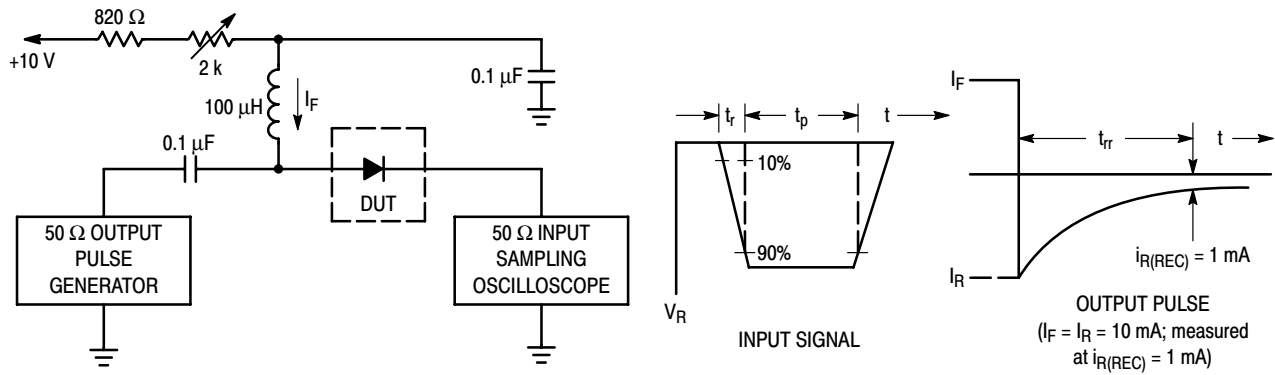
ORDERING INFORMATION

Device	Package	Shipping
RB751V40T1	SOD–323	3000/Tape & Reel

RB751V40T1

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10\ \mu\text{A}$)	$V_{(BR)R}$	30	—	—	Volts
Total Capacitance ($V_R = 1.0\ \text{V}$, $f = 1.0\ \text{MHz}$)	C_T	—	2.0	2.5	pF
Reverse Leakage ($V_R = 30\ \text{V}$)	I_R	—	300	500	nA _{dc}
Forward Voltage ($I_F = 1.0\ \text{mA}_{dc}$)	V_F	—	0.28	0.37	V _{dc}



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

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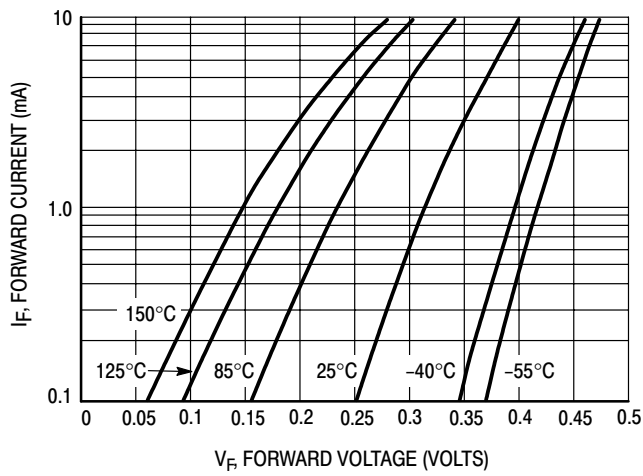


Figure 2. Typical Forward Voltage

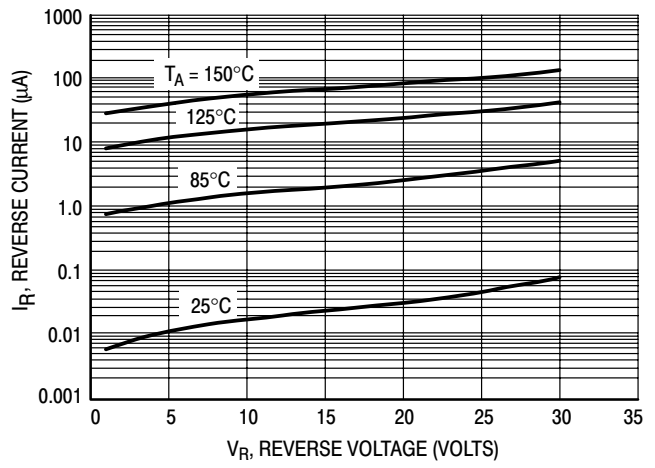


Figure 3. Reverse Current versus Reverse Voltage

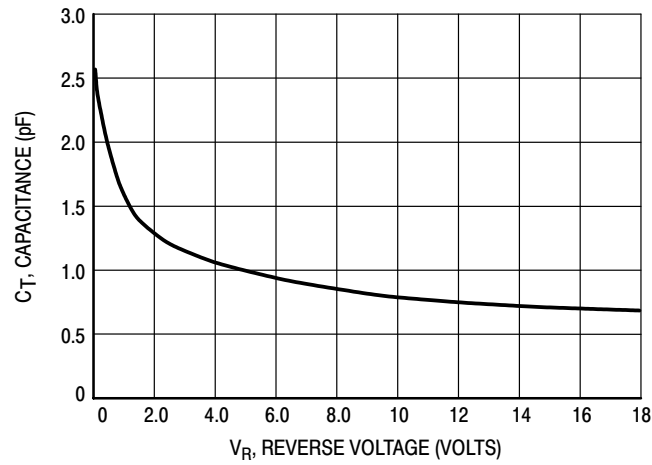
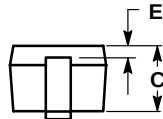
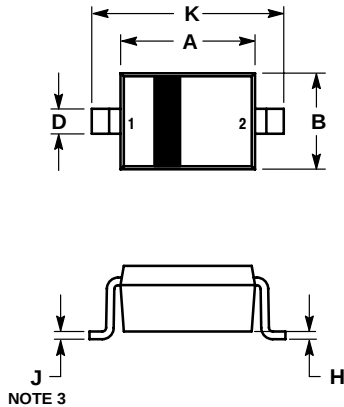


Figure 4. Typical Capacitance

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PACKAGE DIMENSIONS

SOD-323 PLASTIC PACKAGE CASE 477-02 ISSUE B



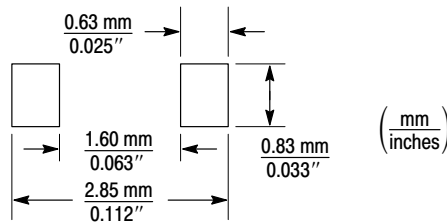
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

STYLE 1:

- PIN 1. CATHODE
- ANODE



SOD-323 Soldering Footprint

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