RB751S40T1

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 mAdc
- Low Reverse Current
- Lead-Free Plating

ON Semiconductor®

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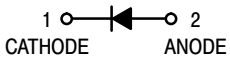
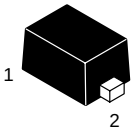
40 V SCHOTTKY BARRIER DIODE





SOD-523
CASE 502
PLASTIC

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°C Derate above 25°C	P_D	200 1.57	mW mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	°C

1. FR-5 Minimum Pad

MARKING DIAGRAM

5E = Specific Device Code
d = Date Code

ORDERING INFORMATION

Device	Package	Shipping
RB751S40T1	SOD-523	4 mm Pitch 4000/Tape & Reel
RB751S40T5	SOD-523	2 mm Pitch 8000/Tape & Reel

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μA)	$V_{(BR)R}$	30	-	-	Volts
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	-	2.0	2.5	pF
Reverse Leakage (V_R = 30 V)	I_R	-	300	500	nAdc
Forward Voltage (I_F = 1.0 mAdc)	V_F	-	0.28	0.37	Vdc

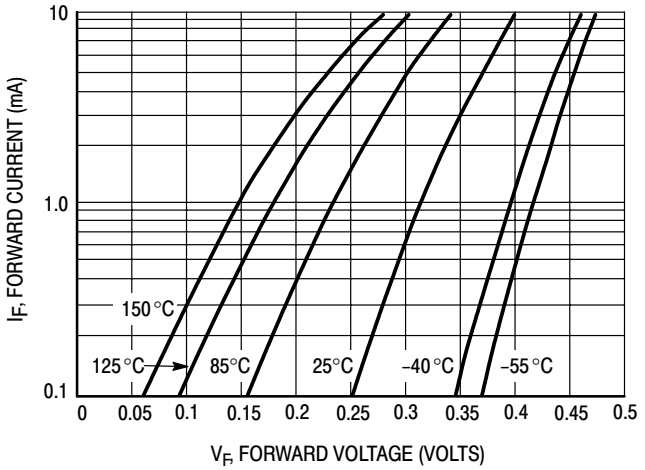


Figure 1. Typical Forward Voltage

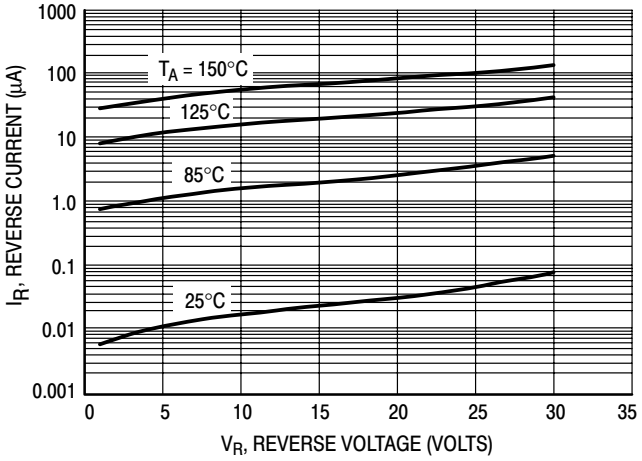


Figure 2. Reverse Current versus Reverse Voltage

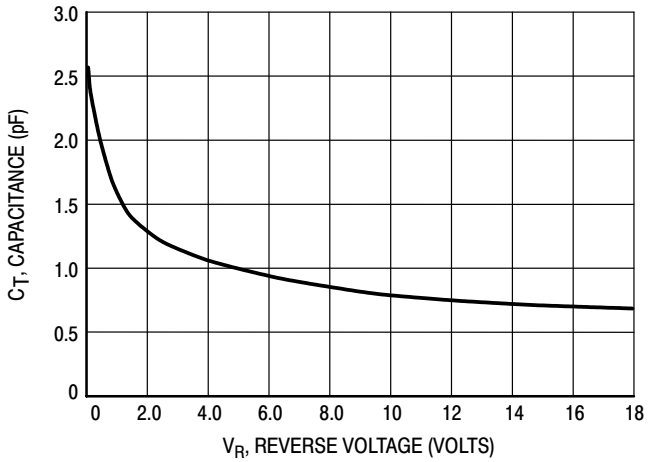
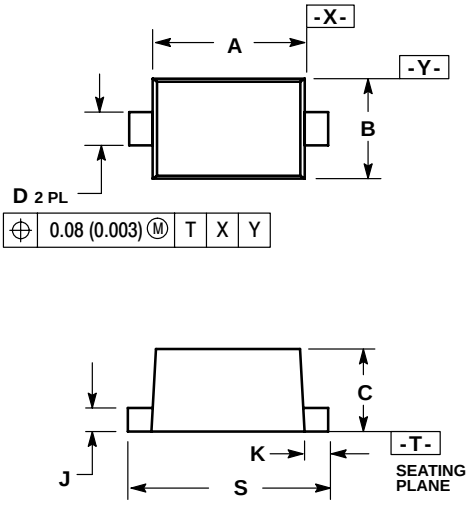


Figure 3. Typical Capacitance

PACKAGE DIMENSIONS

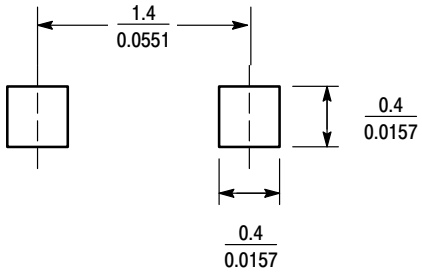
SOD-523
PLASTIC PACKAGE
CASE 502-01
ISSUE O



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

RECOMMENDED FOOTPRINT



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