

# RB520S30T1

## 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 0.6 V (max) @  $I_F = 200$  mA
- Low Reverse Current

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	30	Vdc
Forward Current DC	$I_F$	200	mA
ESD Rating: Class 3B per Human Body Model Class C per Machine Model			

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (Note 1) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	200 1.57	mW 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

### ELECTRICAL CHARACTERISTICS

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

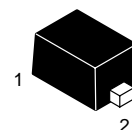
Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Leakage ( $V_R = 10$ V)	$I_R$	—	—	1.0	$\mu\text{A}$
Forward Voltage ( $I_F = 200$ mA)	$V_F$	—	—	0.60	Vdc



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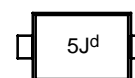
<http://onsemi.com>

## 30 V SCHOTTKY BARRIER DIODE



SOD-523  
CASE 502  
PLASTIC

### MARKING DIAGRAM



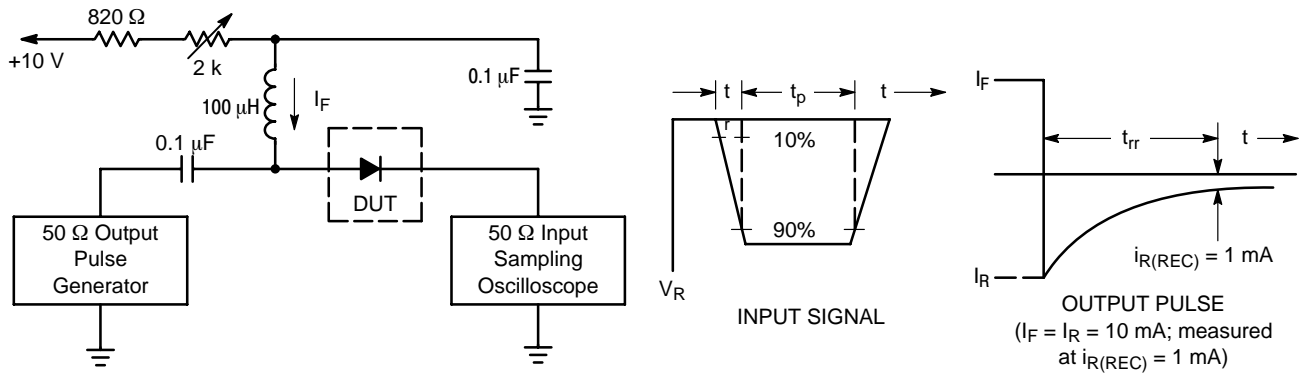
5J = Specific Device Code  
d = Date Code

### ORDERING INFORMATION

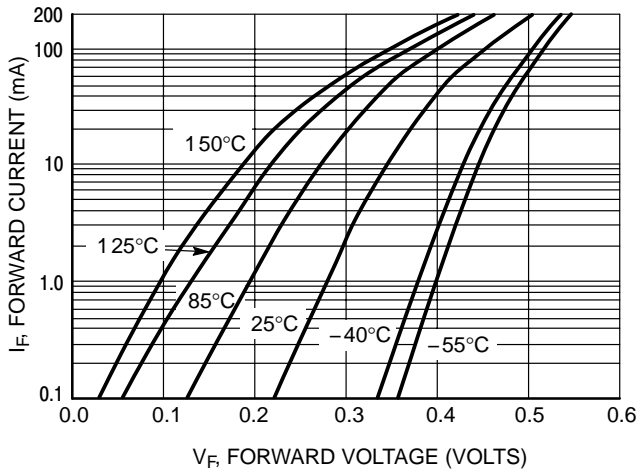
Device	Package	Shipping†
RB520S30T1	SOD-523	4 mm Pitch 3000/Tape & Reel
RB520S30T5	SOD-523	2 mm Pitch 8000/Tape & Reel

†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.

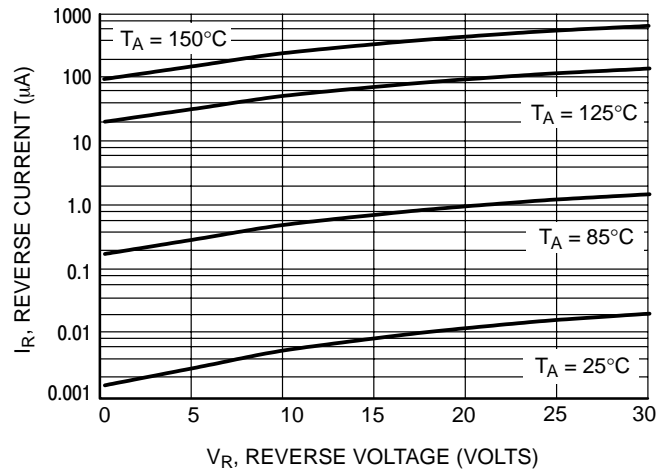
# RB520S30T1



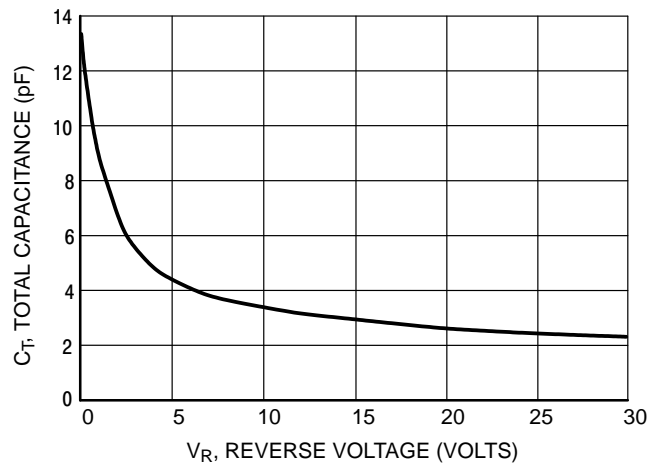
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**

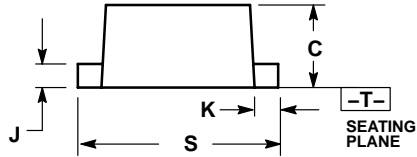
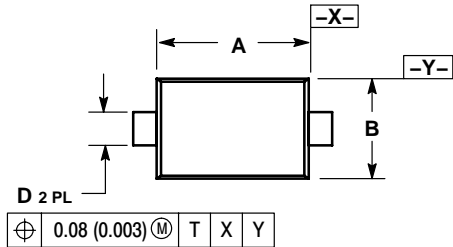


**Figure 4. Total Capacitance**

# RB520S30T1

## PACKAGE DIMENSIONS

**SOD-523**  
PLASTIC PACKAGE  
CASE 502-01  
ISSUE O

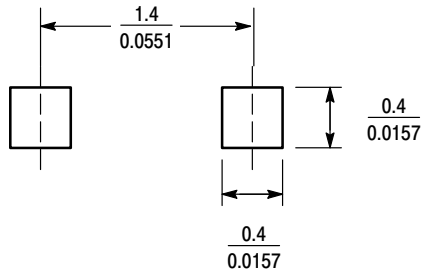



### NOTES:

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.

DIM	MILLIMETERS			INCHES		
	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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