RB521S30T1G, NSVRB521S30T1G, RB521S30T5G

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.

Features

- Extremely Fast Switching Speed
- Extremely Low Forward Voltage 0.5 V (max) @ I_F = 200 mA
- Low Reverse Current
- AEC Qualified and PPAP Capable
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant*

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Vdc
Forward Current DC	I_F	200	mA
Peak Forward Surge Current (Note 1)	I_{FSM}	1.0	A
ESD Rating: Class 1C per Human Body Model Class C per Machine Model			

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. 60 Hz for 1 cycle.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR−5 Board, (Note 2) 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 +125	°C

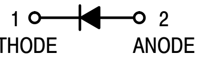
2. FR−5 Minimum Pad.

ON Semiconductor®

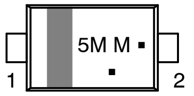
http://onsemi.com

30 V SCHOTTKY BARRIER DIODE

SOD−523
CASE 502



MARKING DIAGRAM



5M	=	Device Code
M	=	Date Code*
▪	=	Pb−Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping†
RB521S30T1G	SOD−523 (Pb−Free)	4 mm Pitch 3,000/Tape & Reel
NSVRB521S30T1G	SOD−523 (Pb−Free)	4 mm Pitch 3,000/Tape & Reel
RB521S30T5G	SOD−523 (Pb−Free)	2 mm Pitch 8,000/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.

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

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Leakage (V_R = 10 V)	I_R	–	–	30.0	μA
Forward Voltage (I_F = 200 mA)	V_F	–	–	0.50	Vdc

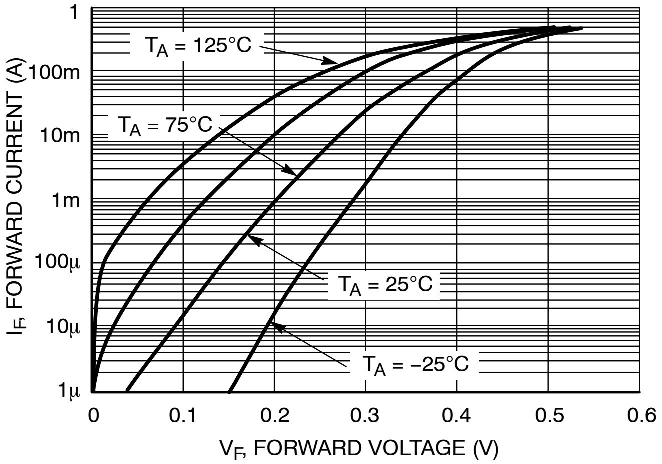


Figure 1. Forward Characteristics

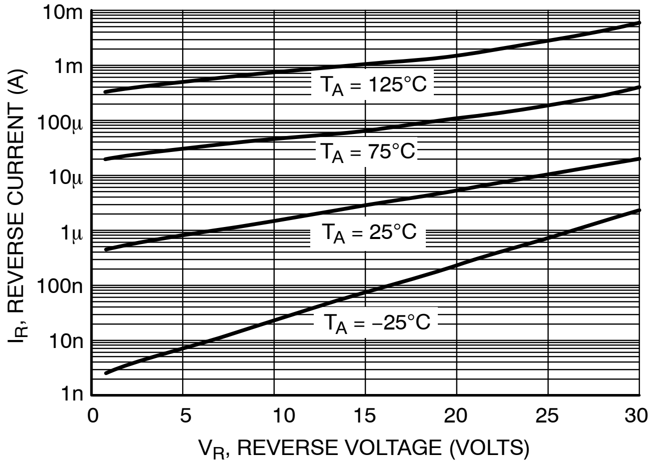


Figure 2. Reverse Characteristics

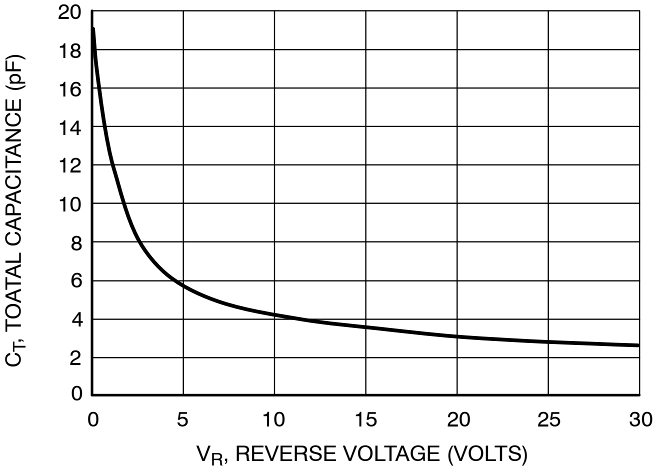
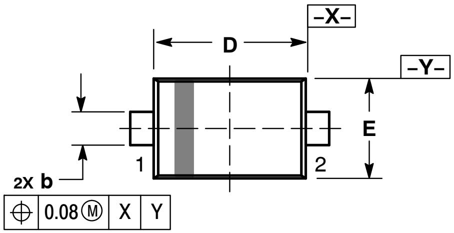


Figure 3. Total Capacitance

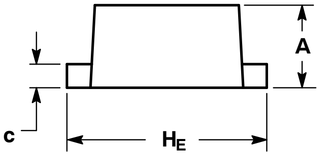
PACKAGE DIMENSIONS

SOD−523

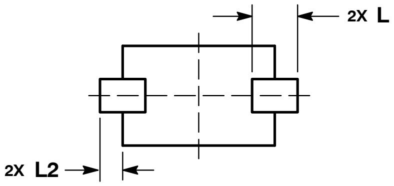
CASE 502−01
ISSUE E



TOP VIEW



SIDE VIEW



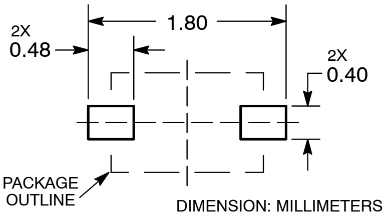
BOTTOM VIEW

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.

	MILLIMETERS		
DIM	**MIN**	**NOM**	**MAX**
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.07	0.14	0.20
D	1.10	1.20	1.30
E	0.70	0.80	0.90
H_E	1.50	1.60	1.70
L	0.30 REF		
L2	0.15	0.20	0.25

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

RECOMMENDED SOLDERING FOOTPRINT*



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

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