# THE DATASHEET OF

# NSR0130M2T5G

www.win-source.net 0086-755-83957316

# NSR0130M2

# 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 0.385 V (max) @ $I_F$ = 10 mA
- Low Reverse Current
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

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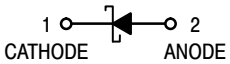
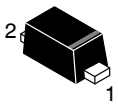
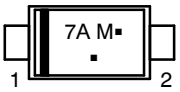
**30 V SCHOTTKY BARRIER DIODE**




**SOD−723**
**CASE 509AA**

**MARKING DIAGRAM**




7A = Specific Device Code
M = Month Code
▪ = Pb−Free Package
(Note: Microdot may be in either location)

## MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 30 | Vdc |
| Forward Current DC | $I_F$ | 100 | mA |
| Forward Current Surge Peak (60 Hz, 1 cycle) | $I_{FSM}$ | 1.0 | A |
| ESD Rating: Class 3B per Human Body Model<br>Class B per Machine Model | | | |

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.

## THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|---|---|---|
| Total Device Dissipation FR−5 Board, (Note 1) $T_A$ = 25°C<br>Derate above 25°C | $P_D$ | 200<br>2.0 | mW<br>mW/°C |
| Thermal Resistance, Junction−to−Ambient | $R_{\theta JA}$ | 600 | °C/W |
| Junction and Storage Temperature Range | $T_J$, $T_{stg}$ | −55 to +125 | °C |

1. FR−5 Minimum Pad.

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

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Reverse Leakage<br>($V_R$ = 10 V)<br>($V_R$ = 30 V) | $I_R$ | <br>–<br>– | <br>–<br>– | <br>0.35<br>3.0 | μA |
| Forward Voltage<br>($I_F$ = 10 mA)<br>($I_F$ = 100 mA) | $V_F$ | <br>–<br>– | <br>–<br>– | <br>0.385<br>0.525 | Vdc |

## ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| NSR0130M2T5G | SOD−723 | 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.

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NSR0130/D

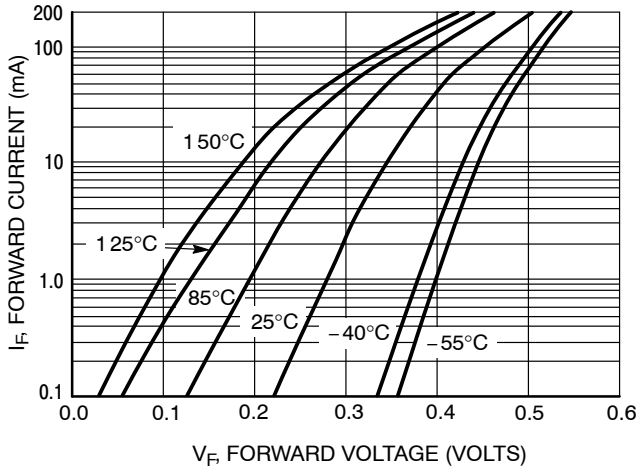



**Figure 1. Forward Voltage**

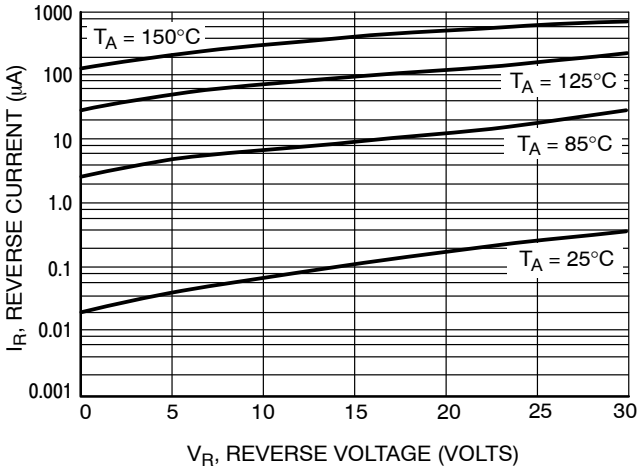



**Figure 2. Leakage Current**

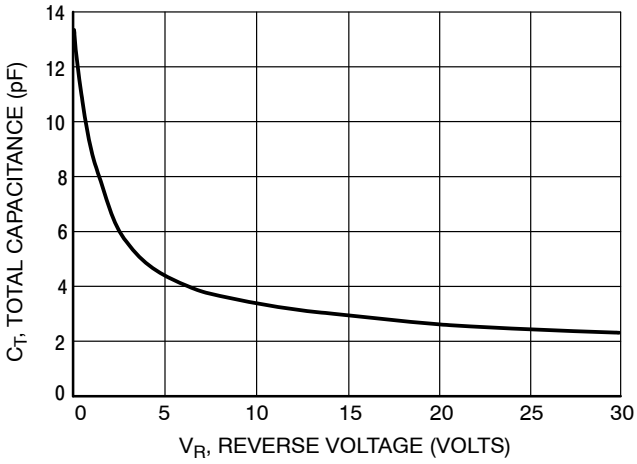
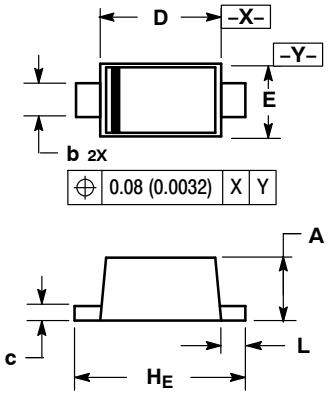



**Figure 3. Total Capacitance**

SCALE 8:1

**SOD−723**
CASE 509AA−01
ISSUE O

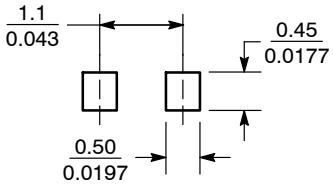
DATE 02 MAR 2005




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 | 0.49 | 0.52 | 0.55 | 0.019 | 0.020 | 0.022 |
| b | 0.25 | 0.28 | 0.32 | 0.0098 | 0.011 | 0.013 |
| c | 0.08 | 0.12 | 0.15 | 0.0032 | 0.0047 | 0.0059 |
| D | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| E | 0.55 | 0.60 | 0.65 | 0.022 | 0.024 | 0.026 |
| $H_E$ | 1.35 | 1.40 | 1.45 | 0.053 | 0.055 | 0.057 |
| L | 0.15 | 0.20 | 0.25 | 0.006 | 0.0079 | 0.010 |

**SOLDERING FOOTPRINT***

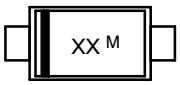



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

**SOD−723**

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

**GENERIC MARKING DIAGRAM***




XX = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking.
Pb−Free indicator, “G” or microdot “ ▪”, may or may not be present.

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|---|---|---|
| DESCRIPTION: | SOD−723, 2−LEAD, 1.4X0.6X0.52 MM | PAGE 1 OF 1 |

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