# MMBV3401LT1

**Preferred Device**

# Silicon Pin Diode

This device is designed primarily for VHF band switching applications but is also suitable for use in general−purpose switching circuits. Supplied in a Surface Mount package.

### Features

- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Capacitance − 0.7 pF (Typ) at $V_R$ = 20 Vdc
- Very Low Series Resistance at 100 MHz 0.34 Ω (Typ) @ $I_F$ = 10 mAdc
- Pb−Free Packages are Available

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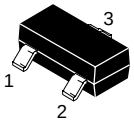


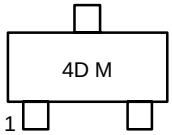

**SOT−23 (TO−236AB)**
**CASE 318−08**
**STYLE 8**

### MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 35 | Vdc |
| Forward Power Dissipation<br>@ $T_A$ = 25°C<br>Derate above 25°C | $P_D$ | <br>200<br>2.0 | mW<br>mW/°C |
| Junction Temperature | $T_J$ | +125 | °C |
| Storage Temperature Range | $T_{stg}$ | −55 to +150 | °C |

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

### MARKING DIAGRAM




4D = Specific Device Code
M = Date Code
▪ = Pb−Free Package

### ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| MMBV3401LT1 | SOT−23 | 3000 Tape & Reel |
| MMBV3401LT1G | SOT−23<br>(Pb−Free) | 3000 Tape & Reel |
| MMBV3401LT3 | SOT−23 | 10,000 Tape & Reel |
| MMBV3401LT3G | SOT−23<br>(Pb−Free) | 10,000 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.

**Preferred** devices are recommended choices for future use and best overall value.

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

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Reverse Breakdown Voltage ($I_R$ = 10 μAdc) | $V_{(BR)R}$ | 35 | – | – | Vdc |
| Diode Capacitance ($V_R$ = 20 Vdc) | $C_T$ | – | – | 1.0 | pF |
| Series Resistance (Figure 1) ($I_F$ = 10 mAdc, f = 100 MHz) | $R_S$ | – | – | 0.7 | Ω |
| Reverse Leakage Current ($V_R$ = 25 Vdc) | $I_R$ | – | – | 0.1 | μAdc |

## TYPICAL CHARACTERISTICS

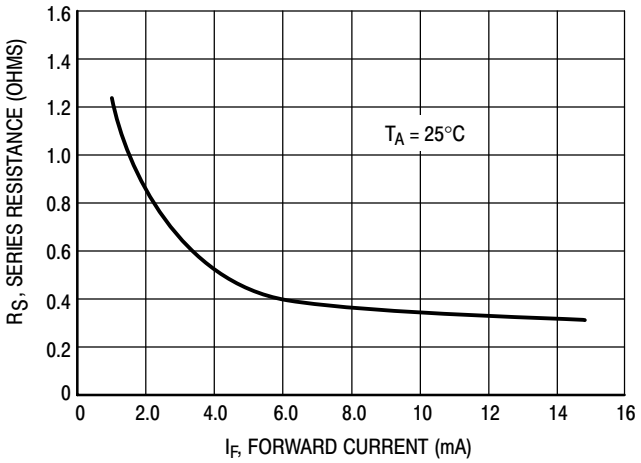



**Figure 1. Series Resistance**

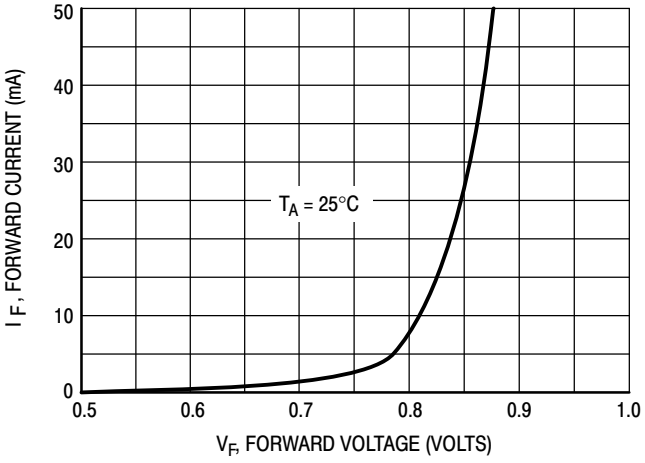



**Figure 2. Forward Voltage**

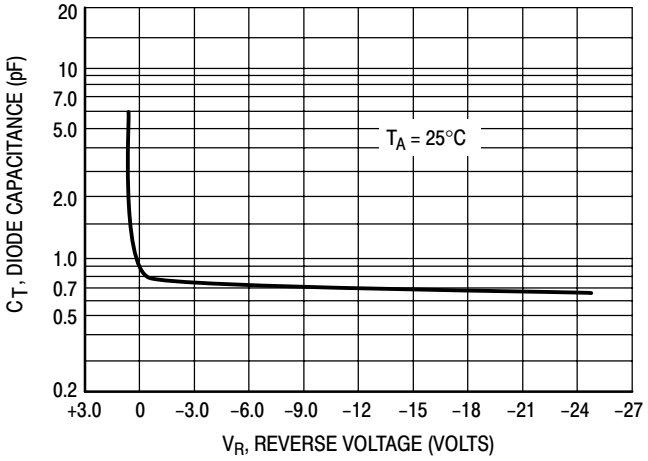



**Figure 3. Diode Capacitance**

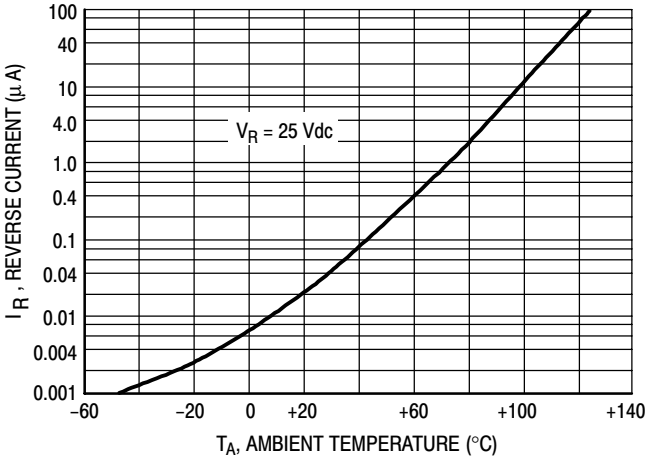
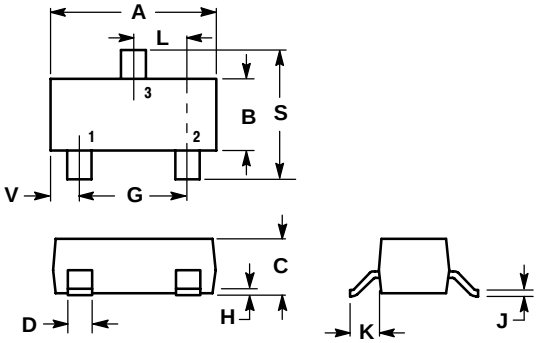



**Figure 4. Leakage Current**

## PACKAGE DIMENSIONS

**SOT−23 (TO−236AB)**
CASE 318−08
ISSUE AH

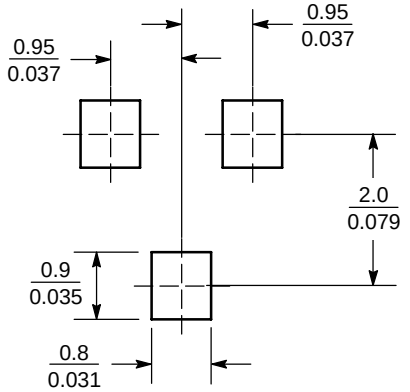



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318−01 THRU −07 AND −09 OBSOLETE, NEW STANDARD 318−08.

| | INCHES | | MILLIMETERS | |
|---|---|---|---|---|
| DIM | MIN | MAX | MIN | MAX |
| A | 0.1102 | 0.1197 | 2.80 | 3.04 |
| B | 0.0472 | 0.0551 | 1.20 | 1.40 |
| C | 0.0350 | 0.0440 | 0.89 | 1.11 |
| D | 0.0150 | 0.0200 | 0.37 | 0.50 |
| G | 0.0701 | 0.0807 | 1.78 | 2.04 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0034 | 0.0070 | 0.085 | 0.177 |
| K | 0.0140 | 0.0285 | 0.35 | 0.69 |
| L | 0.0350 | 0.0401 | 0.89 | 1.02 |
| S | 0.0830 | 0.1039 | 2.10 | 2.64 |
| V | 0.0177 | 0.0236 | 0.45 | 0.60 |

STYLE 8:
PIN 1. ANODE
2. NO CONNECTION
3. CATHODE

### SOLDERING FOOTPRINT*




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

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

## PUBLICATION ORDERING INFORMATION

**LITERATURE FULFILLMENT**:
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P.O. Box 61312, Phoenix, Arizona 85082−1312 USA
**Phone**: 480−829−7710 or 800−344−3860 Toll Free USA/Canada
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**ON Semiconductor Website**: http://onsemi.com

**Order Literature**: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.

**MMBV3401LT1/D**