

# 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 Ohms (Typ) @  $I_F = 10$  mAdc

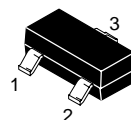
### MAXIMUM RATINGS

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



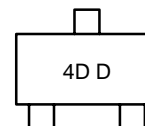
**ON Semiconductor®**

<http://onsemi.com>



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

### MARKING DIAGRAM



4D = Specific Device Code  
D = Date Code

### ORDERING INFORMATION

Device	Package	Shipping†
MMBV3401LT1	SOT-23	3000/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.

# MMBV3401LT1

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

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

TYPICAL CHARACTERISTICS

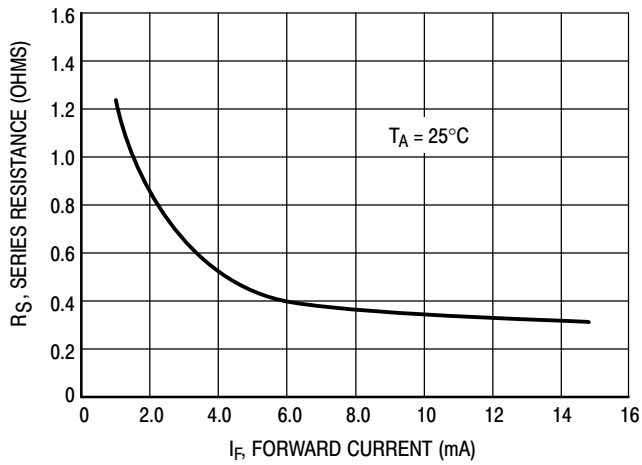


Figure 1. Series Resistance

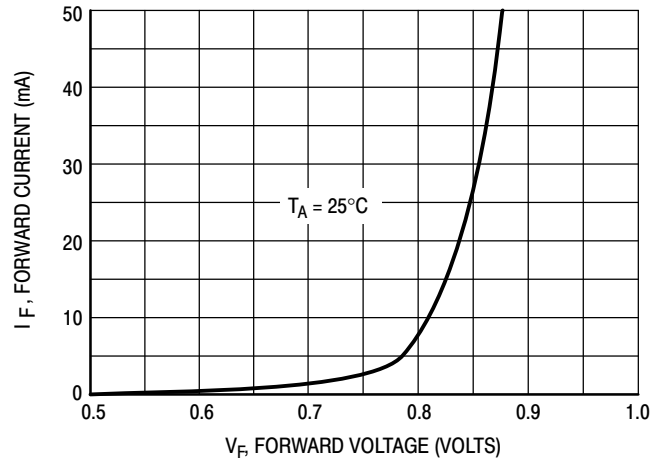


Figure 2. Forward Voltage

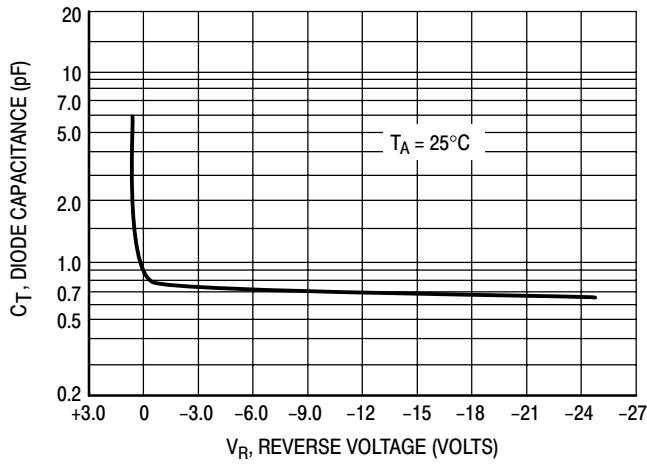


Figure 3. Diode Capacitance

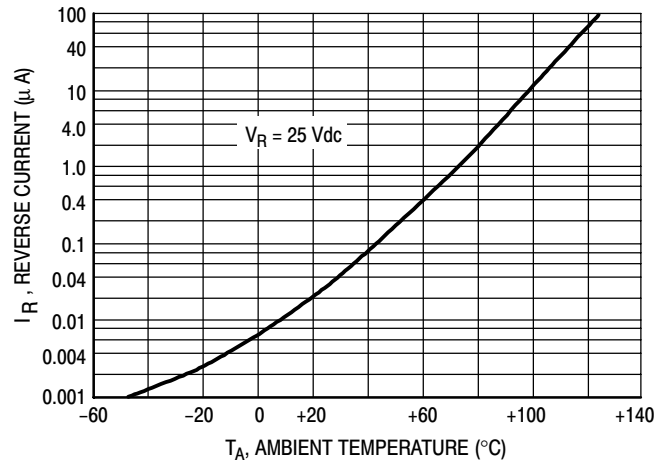
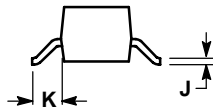
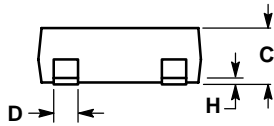
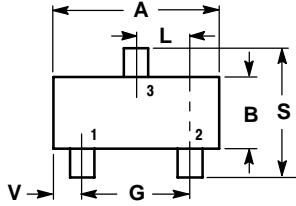


Figure 4. Leakage Current

# MMBV3401LT1

## PACKAGE DIMENSIONS

SOT-23 (TO-236)  
CASE 318-08  
ISSUE AI



### NOTES:

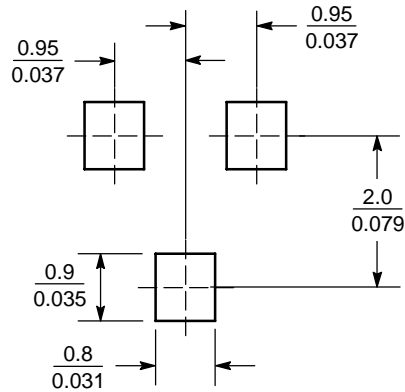
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-03 AND -07 OBSOLETE, NEW STANDARD 318-08.

DIM	INCHES		MILLIMETERS	
	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
E	0.0701	0.0807	1.78	2.04
F	0.0005	0.0040	0.013	0.100
G	0.0034	0.0070	0.085	0.177
H	0.0140	0.0285	0.35	0.69
I	0.0350	0.0401	0.89	1.02
J	0.0830	0.1039	2.10	2.64
K	0.0177	0.0236	0.45	0.60

### STYLE 8:

- PIN 1. ANODE
- NO CONNECTION
- CATHODE


## SOLDERING FOOTPRINT\*



SCALE 10:1 (mm/inches)

## SOT-23

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

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