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  $0.34 \ \Omega$  (Typ) @ I<sub>F</sub> = 10 mAdc
- Pb-Free Packages are Available



# ON Semiconductor<sup>®</sup>

http://onsemi.com

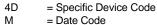




SOT-23 (TO-236AB) CASE 318-08 STYLE 8

#### **MARKING DIAGRAM**





= Date Code

= Pb-Free Package

#### **ORDERING INFORMATION**

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

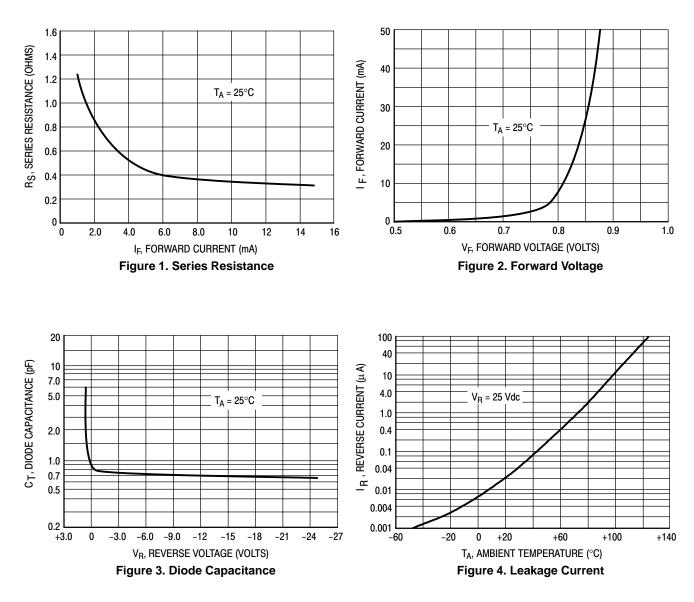
## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	35	Vdc
Forward Power Dissipation @ T <sub>A</sub> = 25°C Derate above 25°C	P <sub>D</sub>	200 2.0	mW mW/°C
Junction Temperature	TJ	+125	°C
Storage Temperature Range	T <sub>stg</sub>	-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.

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

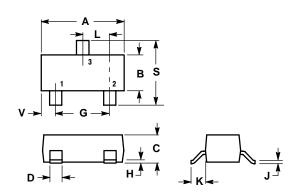
Characteristic	Symbol	Min	Тур	Max	Unit
Reverse Breakdown Voltage (I <sub>R</sub> = 10 μAdc)	V <sub>(BR)R</sub>	35	-	-	Vdc
Diode Capacitance (V <sub>R</sub> = 20 Vdc)	CT	-	-	1.0	pF
Series Resistance (Figure 1) (I <sub>F</sub> = 10 mAdc, f = 100 MHz)	R <sub>S</sub>	-	-	0.7	Ω
Reverse Leakage Current $(V_R = 25 \text{ Vdc})$	I <sub>R</sub>	-	-	0.1	μAdc



## **TYPICAL CHARACTERISTICS**

#### PACKAGE DIMENSIONS

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



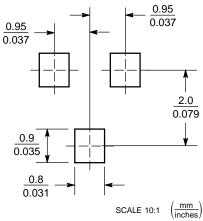
- NOTES: 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982. 2. CONTROLLING DIMENSION: INCH. 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL. 4. 318–01 THRU –07 AND –09 OBSOLETE, NEW STANDARD 318–08.

	INCHES		MILLIN	IETERS	
DIM	MIN	MAX	MIN	MAX	
Α	0.1102	0.1197	2.80	3.04	
В	0.0472	0.0551	1.20	1.40	
С	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	
н	0.0005	0.0040	0.013	0.100	
J	0.0034	0.0070	0.085	0.177	
ĸ	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\***



\*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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