

# MMVL3401T1

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.

- 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
- Device Marking: 4D

### MAXIMUM RATINGS

Symbol	Rating	Value	Unit
$V_R$	Continuous Reverse Voltage	20	Vdc
$I_F$	Peak Forward Current	20	mAdc

### THERMAL CHARACTERISTICS

Symbol	Characteristic	Max	Unit
$P_D$	Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	200 1.57	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	$^\circ\text{C}/\text{W}$
$T_J, T_{stg}$	Junction and Storage Temperature	150	$^\circ\text{C}$

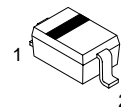
\*FR-4 Minimum Pad



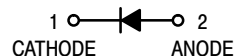
ON Semiconductor™

<http://onsemi.com>

## SILICON PIN SWITCHING DIODE



PLASTIC  
SOD-323  
CASE 477



### ORDERING INFORMATION

Device	Package	Shipping
MMVL3401T1	SOD-323	3000 / Tape & Reel

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

# MMVL3401T1

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{A}$ )	$V_{(BR)R}$	35	—	—	Vdc
Diode Capacitance ( $V_R = 20 \text{Vdc}$ )	$C_T$	—	—	1.0	pF
Series Resistance (Figure 5) ( $I_F = 10 \text{mA}$ , $f = 100 \text{MHz}$ )	$R_S$	—	—	0.7	$\Omega$
Reverse Leakage Current ( $V_R = 25 \text{Vdc}$ )	$I_R$	—	—	0.1	$\mu\text{A}$

## TYPICAL CHARACTERISTICS

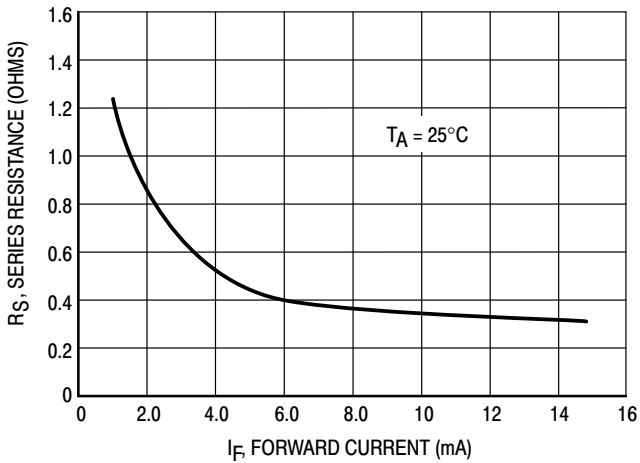


Figure 1. Series Resistance

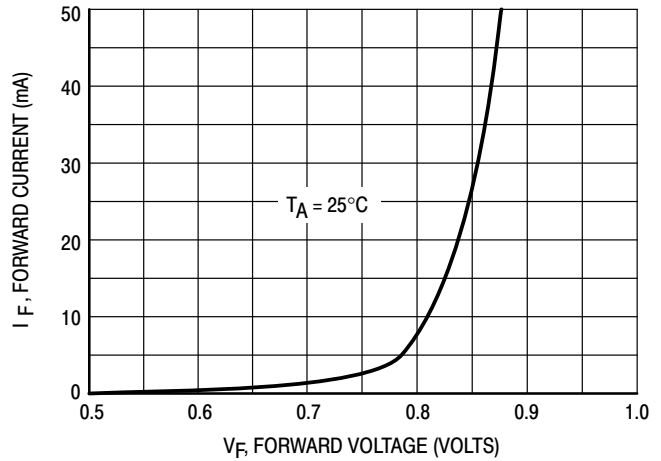


Figure 2. Forward Voltage

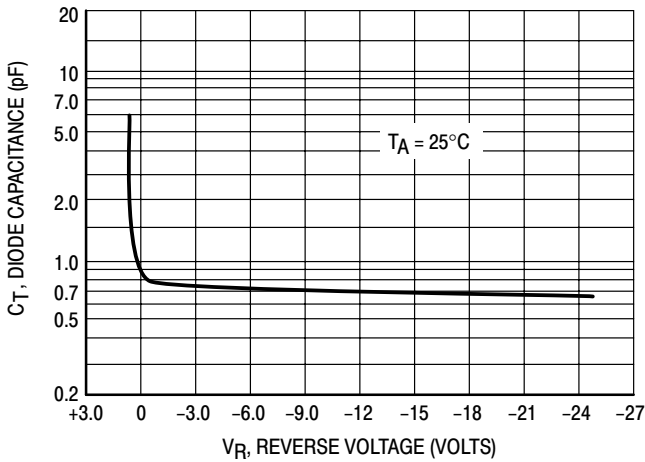


Figure 3. Diode Capacitance

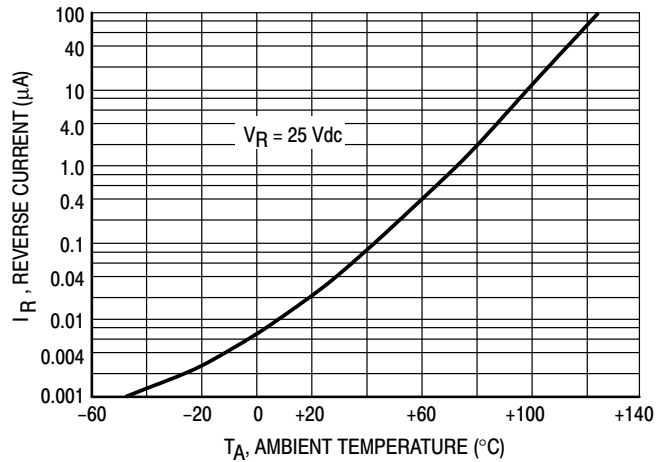
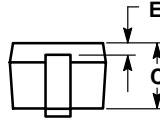
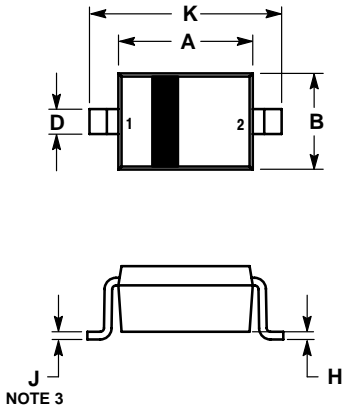


Figure 4. Leakage Current

# MMVL3401T1

## PACKAGE DIMENSIONS

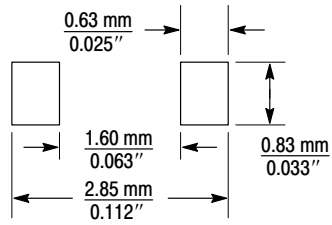
**SOD-323**  
 PLASTIC PACKAGE  
 CASE 477-02  
 ISSUE A



- NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
 2. CONTROLLING DIMENSION: MILLIMETERS.  
 3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106


- STYLE 1:  
 PIN 1. CATHODE  
 2. ANODE



( $\frac{\text{mm}}{\text{inches}}$ )

**SOD-323**  
 Soldering Footprint

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