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MMVL3401T1G

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
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	35	Vdc
Peak Forward Current	I_F	20	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR5 Board, T_A = 25°C (Note 1) Derate above 25°C	P_D	200 1.57	mW mW/°C
Thermal Resistance Junction−to−Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature	T_J, T_{stg}	150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

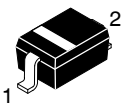
1. FR4 Minimum Pad

ON Semiconductor®

http://onsemi.com

SILICON PIN SWITCHING DIODE





SOD−323
CASE 477
STYLE 1

MARKING DIAGRAM



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

(Note: Microdot may be in either location)
*Date Code orientation may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping†
MMVL3401T1G	SOD−323 (Pb−Free)	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.

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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 5) (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

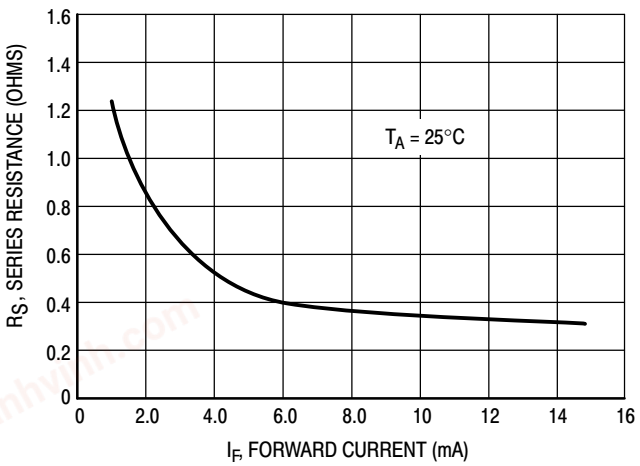


Figure 1. Series Resistance

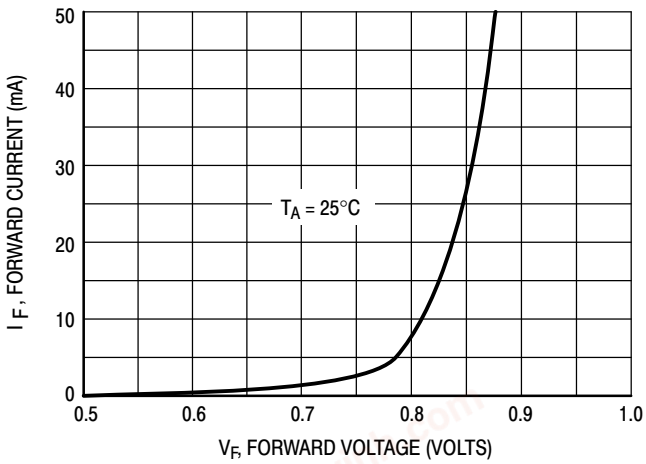


Figure 2. Forward Voltage

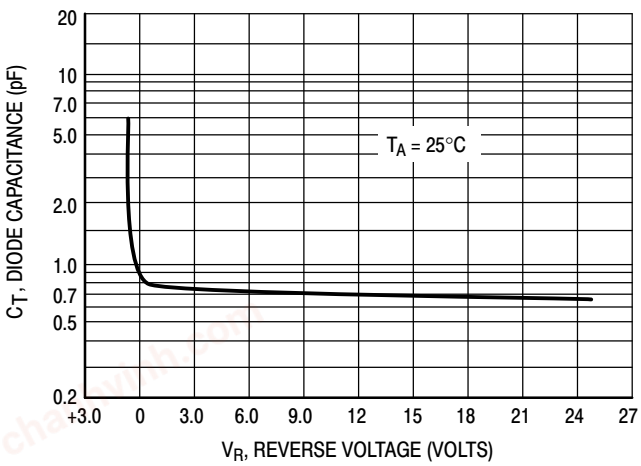


Figure 3. Diode Capacitance

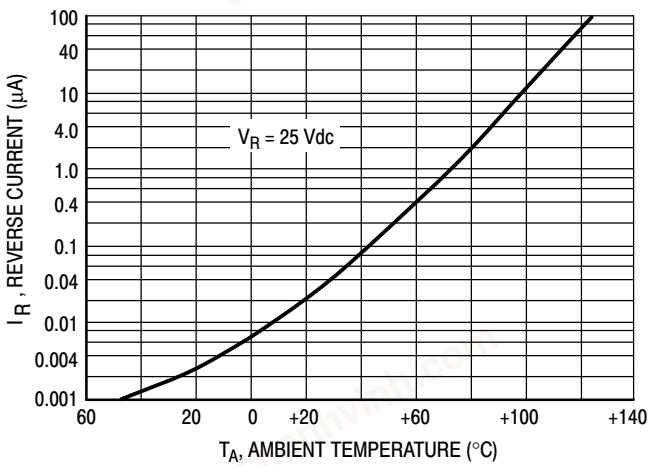


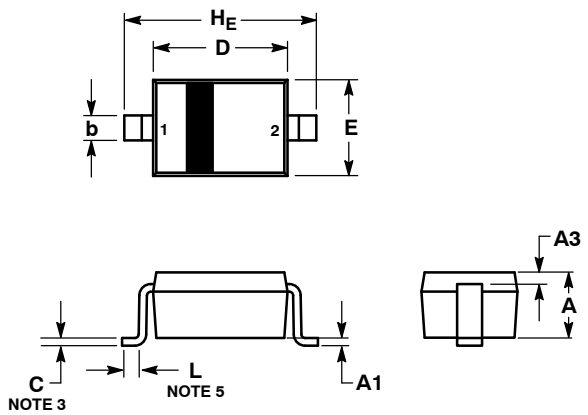
Figure 4. Leakage Current

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MMVL3401T1G

PACKAGE DIMENSIONS

SOD−323
CASE 477−02
ISSUE H

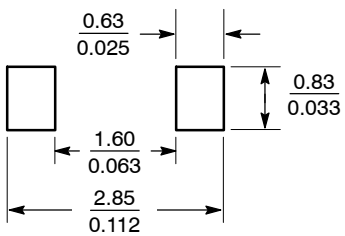


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3		0.15 REF			0.006 REF	
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

STYLE 1:
PIN 1. CATHODE
2. ANODE

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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