

MMVL3700T1

High Voltage Silicon Pin Diode

These devices are designed primarily for VHF band switching applications but are also suitable for use in general-purpose switching circuits. They are supplied in a cost-effective plastic surface mount package for economical, high-volume consumer and industrial requirements.

- Long Reverse Recovery Time
 $t_{rr} = 300 \text{ ns (Typ)}$
- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Series Resistance @ 100 MHz —
 $R_S = 0.7 \text{ Ohms (Typ) @ } I_F = 10 \text{ mAdc}$
- Reverse Breakdown Voltage = 200 V (Min)
- Device Marking: 4R

MAXIMUM RATINGS

Symbol	Rating	Value	Unit
V_R	Continuous Reverse Voltage	200	Vdc
I_F	Peak Forward Current	20	mAdc

THERMAL CHARACTERISTICS

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

*FR-4 Minimum Pad

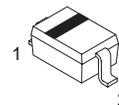


ON Semiconductor

Formerly a Division of Motorola

<http://onsemi.com>

SILICON PIN SWITCHING DIODE



PLASTIC
SOD-323
CASE 477



ORDERING INFORMATION

Device	Package	Shipping
MMVL3700T1	SOD-323	3000 / Tape & Reel

MMVL3700T1

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10 \mu\text{A}$)	$V_{(BR)R}$	200	—	—	Vdc
Diode Capacitance ($V_R = 20 \text{Vdc}$, $f = 1.0 \text{MHz}$)	C_T	—	—	1.0	pF
Series Resistance ($I_F = 10 \text{mA}$)	R_S	—	0.7	1.0	Ω
Reverse Leakage Current ($V_R = 150 \text{Vdc}$)	I_R	—	—	0.1	μA
Reverse Recovery Time ($I_F = I_R = 10 \text{mA}$)	t_{rr}	—	300	—	ns

TYPICAL CHARACTERISTICS

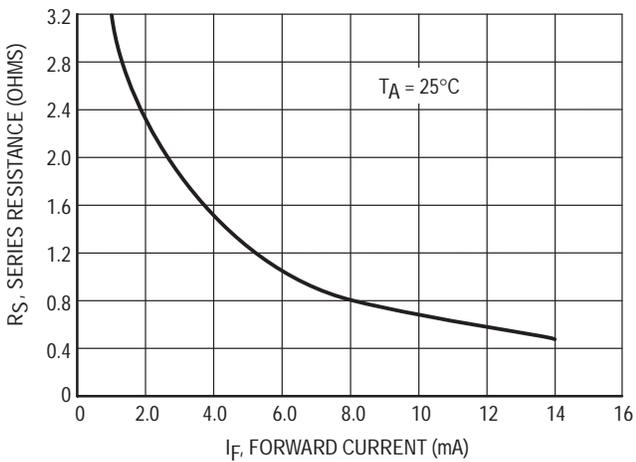


Figure 1. Series Resistance

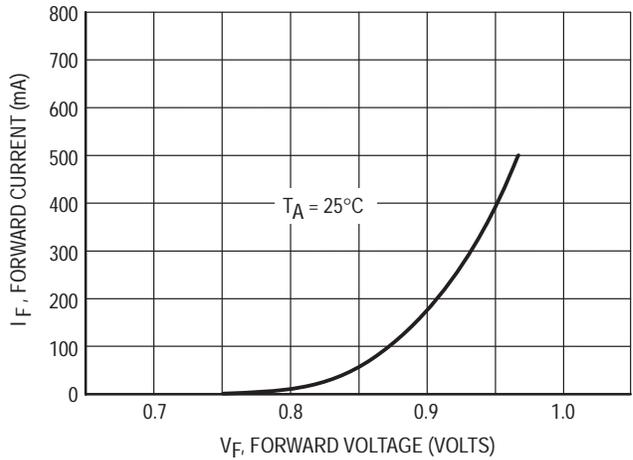


Figure 2. Forward Voltage

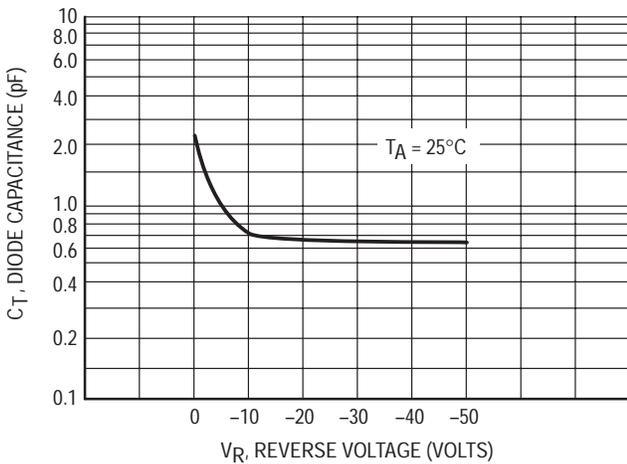


Figure 3. Diode Capacitance

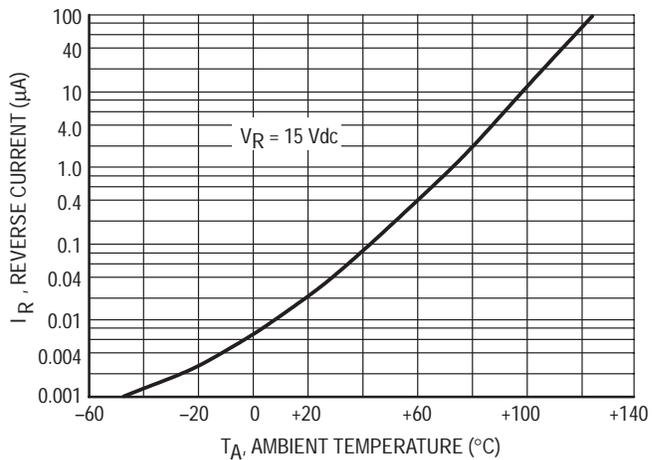
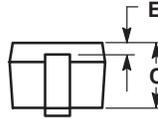
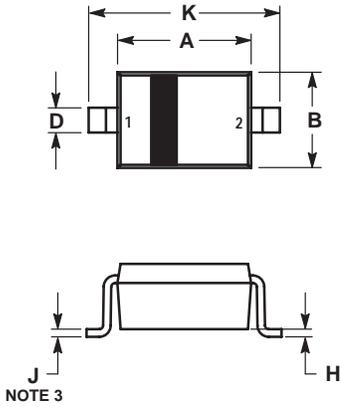


Figure 4. Leakage Current

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PACKAGE DIMENSIONS

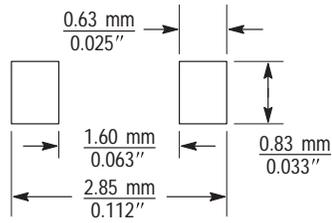
SOD-323 PLASTIC PACKAGE CASE 477-02 ISSUE A



- 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



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

SOD-323 Soldering Footprint

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