

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

MMVL3700T1
**SILICON PIN
SWITCHING DIODE**

**PLASTIC, CASE 477
SOD-323**


ORDERING INFORMATION

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

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,* $T_A = 25^\circ\text{C}$ Derate above 25°C	200 1.57	mW mW/°C
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	°C/W
T_J, T_{stg}	Junction and Storage Temperature	150	°C

*FR-4 Minimum Pad

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

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

MMVL3700T1

TYPICAL CHARACTERISTICS

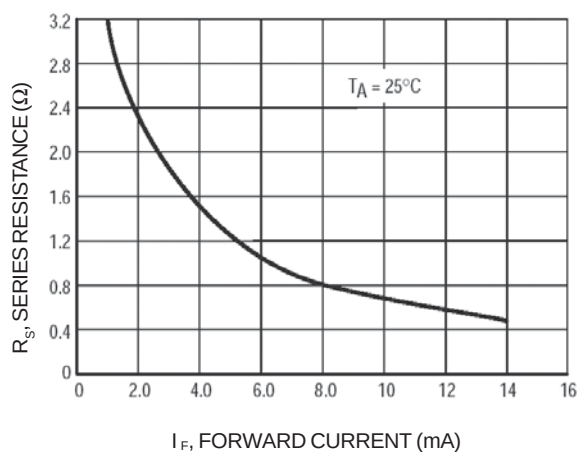


Figure 1. Series Resistance

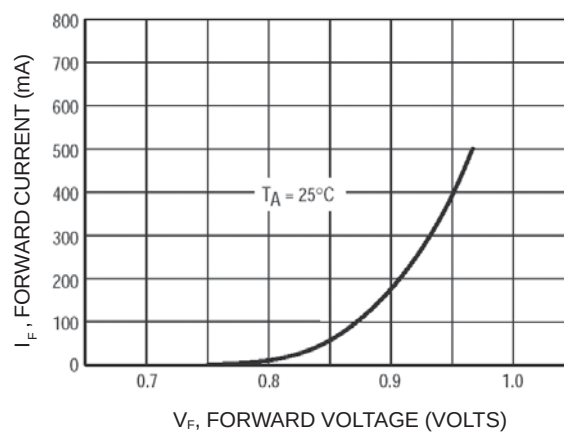


Figure 2. Forward Voltage

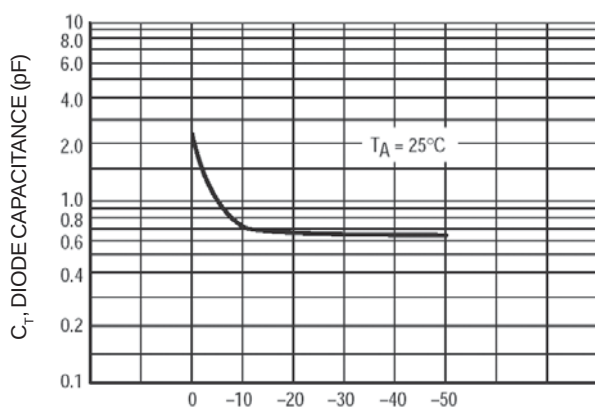


Figure 3. Diode Capacitance

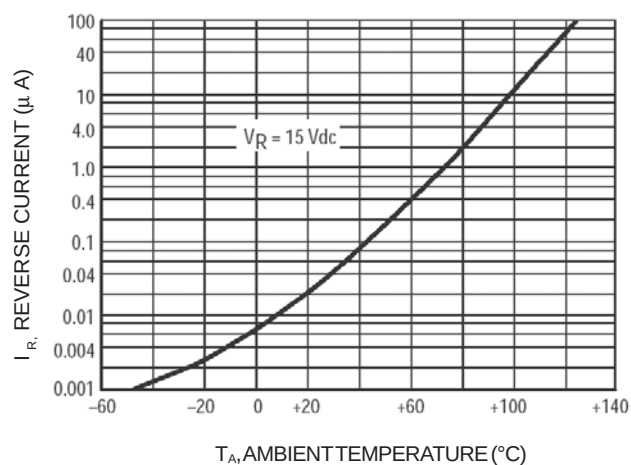


Figure 4. Leakage Current