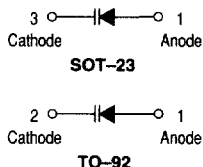


## High Voltage Silicon Pin Diodes

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 package for economical, high-volume consumer and industrial requirements. They are also available in surface mount.

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



### MAXIMUM RATINGS

Rating	Symbol	MPN3700	MMBV3700LT1	Unit
Reverse Voltage	$V_R$	200		Vdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	280 2.8	200 2.0	mW mW/°C
Junction Temperature	$T_J$	+125		°C
Storage Temperature Range	$T_{stg}$	-55 to +150		°C

### DEVICE MARKING

MMBV3700LT1 = 4R
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### 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 (Figure 5) ( $I_F = 10$ mAdc)	$R_S$	—	0.7	1.0	$\Omega$
Reverse Leakage Current ( $V_R = 150$ Vdc)	$I_R$	—	—	0.1	$\mu\text{Adc}$
Reverse Recovery Time ( $I_F = I_R = 10$ mAdc)	$t_{rr}$	—	300	—	ns

**MMBV3700LT1**  
**MPN3700**

**SILICON PIN**  
**SWITCHING DIODES**



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



**CASE 182-02, STYLE 1**  
**TO-92 (TO-226AC)**

TYPICAL CHARACTERISTICS

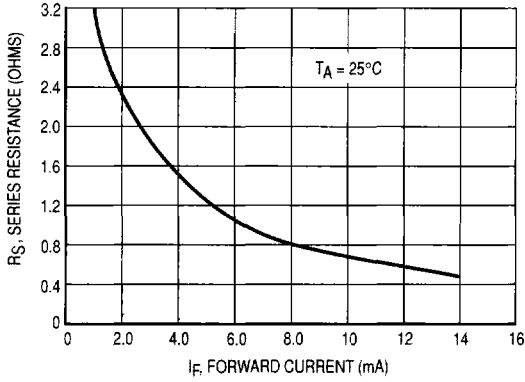


Figure 1. Series Resistance

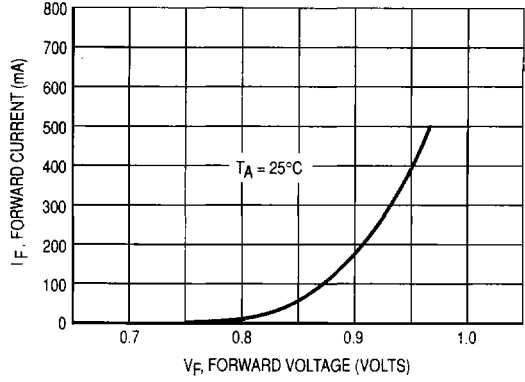


Figure 2. Forward Voltage

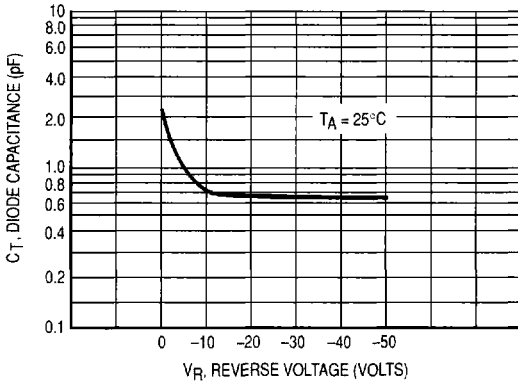


Figure 3. Diode Capacitance

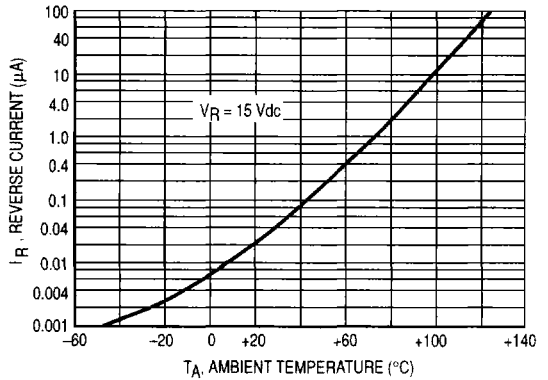


Figure 4. Leakage Current