

# Silicon Pin Diode

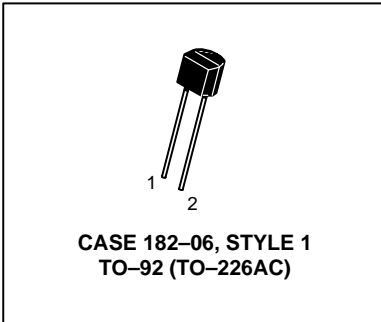
This device is designed primarily for VHF band switching applications but is also suitable for use in general-purpose switching circuits. It is supplied in a cost-effective TO-92 type plastic package for economical, high-volume consumer and industrial requirements.

- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Series Resistance @ 100 MHz —  
 $R_S = 0.7 \text{ Ohms (Typ) @ } I_F = 10 \text{ mAdc}$
- Sturdy TO-92 Style Package for Handling Ease



**MPN3404**

**SILICON PIN SWITCHING DIODE**



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	20	Vdc
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	400 4.0	mW mW/ $^\circ\text{C}$
Junction Temperature	$T_J$	+125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{Adc}$ )	$V_{(BR)R}$	20	—	—	Vdc
Diode Capacitance ( $V_R = 15 \text{ Vdc}$ , $f = 1.0 \text{ MHz}$ )	$C_T$	—	1.3	2.0	pF
Series Resistance (Figure 5) ( $I_F = 10 \text{ mAdc}$ )	$R_S$	—	0.7	0.85	$\Omega$
Reverse Leakage Current ( $V_R = 15 \text{ Vdc}$ )	$I_R$	—	—	0.1	$\mu\text{Adc}$

TYPICAL CHARACTERISTICS

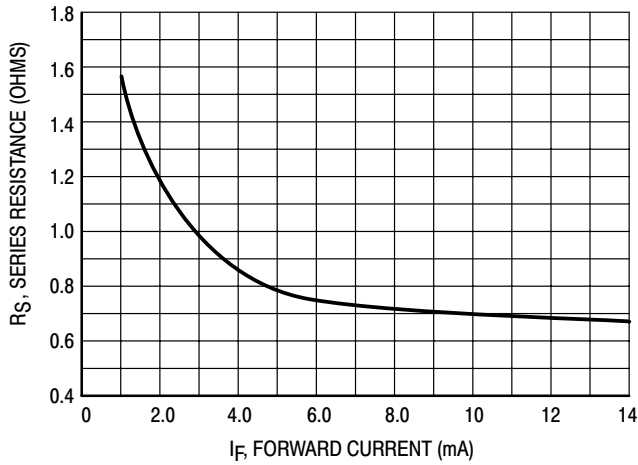


Figure 1. Series Resistance

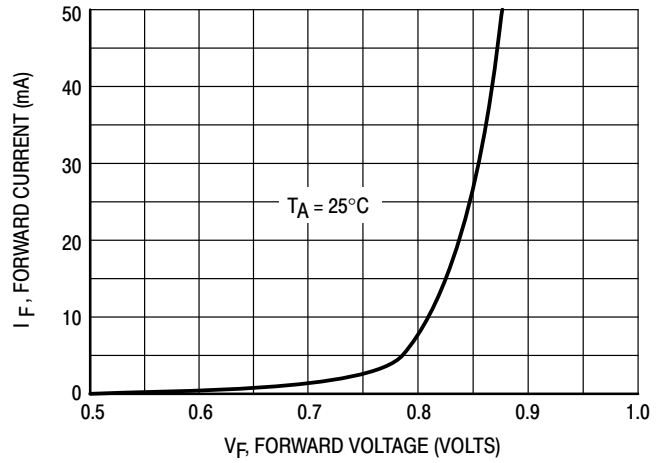


Figure 2. Forward Voltage

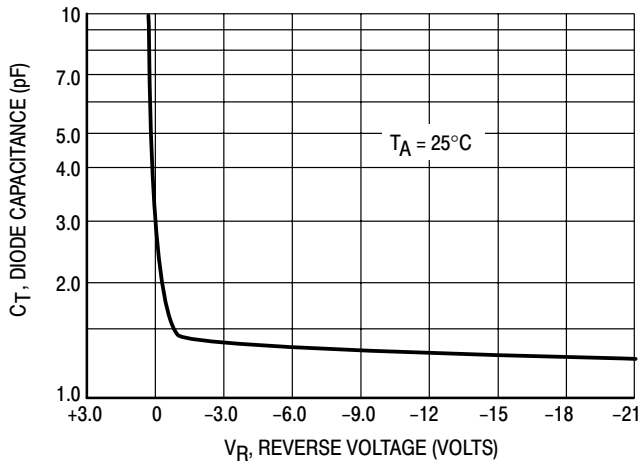


Figure 3. Diode Capacitance

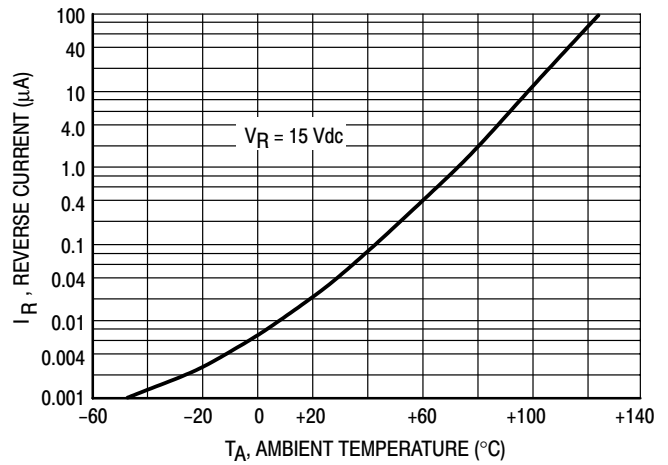
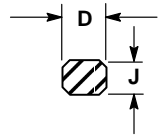
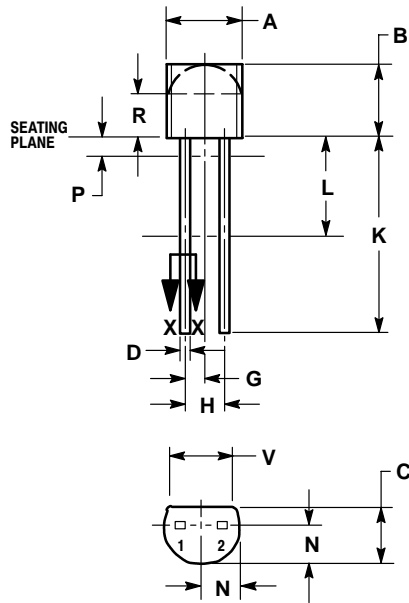


Figure 4. Leakage Current

# MPN3404

## PACKAGE DIMENSIONS

TO-92 (TO-226AC)  
CASE 182-06  
ISSUE L




SECTION X-X

STYLE 1:  
PIN 1. ANODE  
2. CATHODE

- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: INCH.
  3. CONTOUR OF PACKAGE BEYOND ZONE R IS UNCONTROLLED.
  4. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.050 BSC		1.27 BSC	
H	0.100 BSC		2.54 BSC	
J	0.014	0.016	0.36	0.41
K	0.500	---	12.70	---
L	0.250	---	6.35	---
N	0.080	0.105	2.03	2.66
P	---	0.050	---	1.27
R	0.115	---	2.93	---
V	0.135	---	3.43	---

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