

# **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



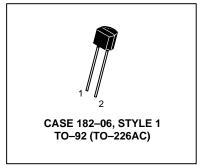
• Low Series Resistance @ 100 MHz —

 $R_S = 0.7 \text{ Ohms (Typ)} @ I_F = 10 \text{ mAdc}$ 

• Sturdy TO-92 Style Package for Handling Ease

## SILICON PIN SWITCHING DIODE

**MPN3404** 



#### **MAXIMUM RATINGS**

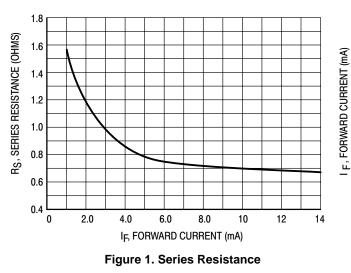
Rating	Symbol	Value	Unit
Reverse Voltage	VR	20	Vdc
Forward Power Dissipation @ T <sub>A</sub> = 25°C Derate above 25°C	PD	400 4.0	mW mW/°C
Junction Temperature	TJ	+125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

#### **ELECTRICAL CHARACTERISTICS** (T<sub>A</sub> = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Тур	Max	Unit
Reverse Breakdown Voltage (I <sub>R</sub> = 10 μAdc)	V <sub>(BR)R</sub>	20	_	_	Vdc
Diode Capacitance (V <sub>R</sub> = 15 Vdc, f = 1.0 MHz)	C <sub>T</sub>	_	1.3	2.0	pF
Series Resistance (Figure 5) (I <sub>F</sub> = 10 mAdc)	RS	_	0.7	0.85	Ω
Reverse Leakage Current (V <sub>R</sub> = 15 Vdc)	IR	_	_	0.1	μAdc

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### **TYPICAL CHARACTERISTICS**



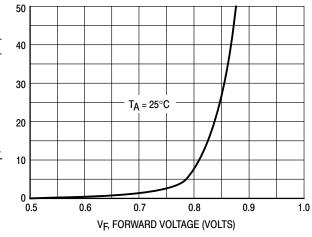
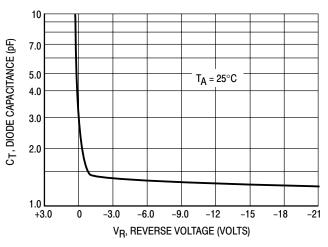


Figure 2. Forward Voltage



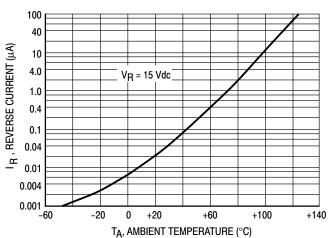
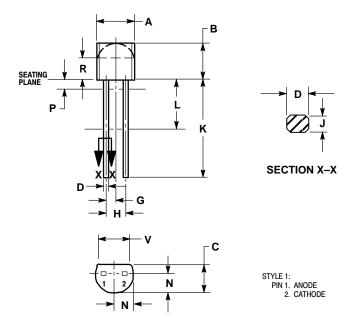


Figure 3. Diode Capacitance

Figure 4. Leakage Current

### **PACKAGE DIMENSIONS**

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



- 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.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.175	0.205	4.45	5.21
В	0.170	0.210	4.32	5.33
С	0.125	0.165	3.18	4.19
D	0.016	0.021	0.407	0.533
G	0.050	BSC	1.27	BSC
Н	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	

#### **MPN3404**

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