

Silicon Pin Diode

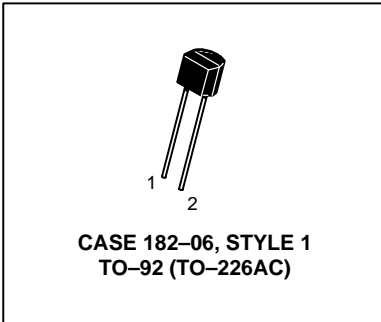
This device is designed primarily for VHF band switching applications but is also suitable for use in general-purpose switching circuits. It is supplied in a cost-effective TO-92 type plastic package for economical, high-volume consumer and industrial requirements.

- 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°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	Ω
Reverse Leakage Current ($V_R = 15 \text{ Vdc}$)	I_R	—	—	0.1	μAdc

TYPICAL CHARACTERISTICS

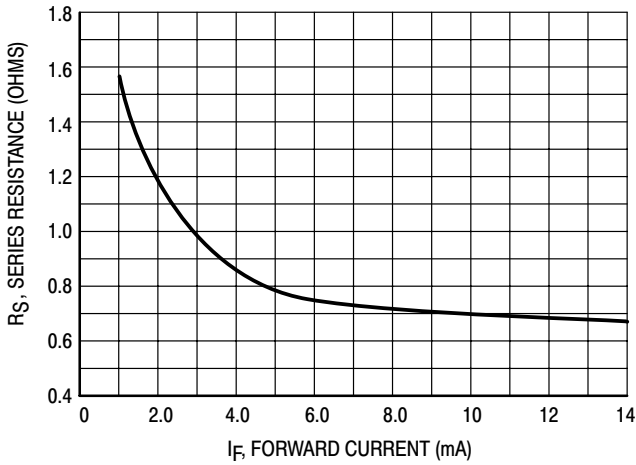


Figure 1. Series Resistance

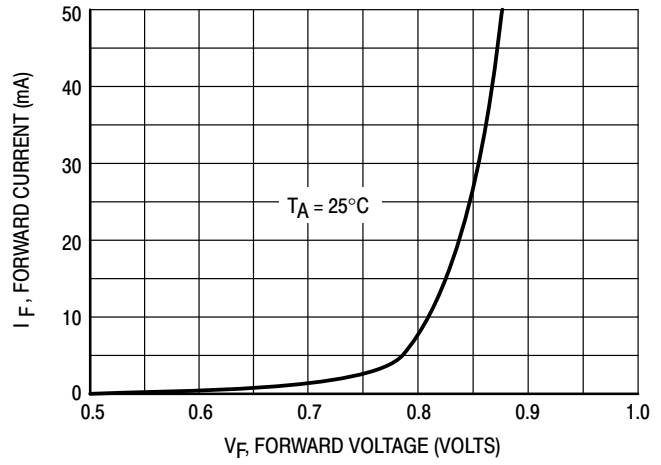


Figure 2. Forward Voltage

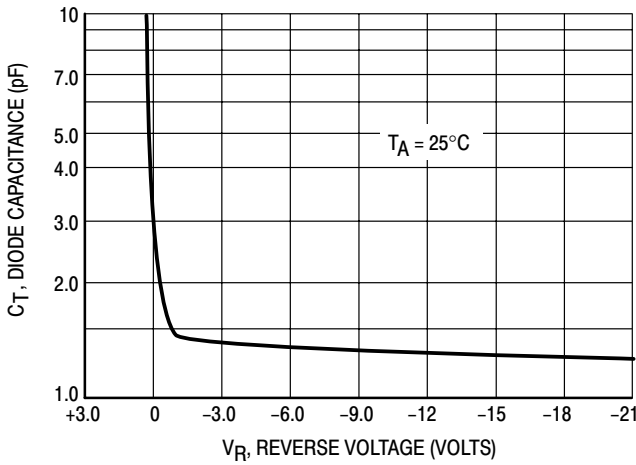


Figure 3. Diode Capacitance

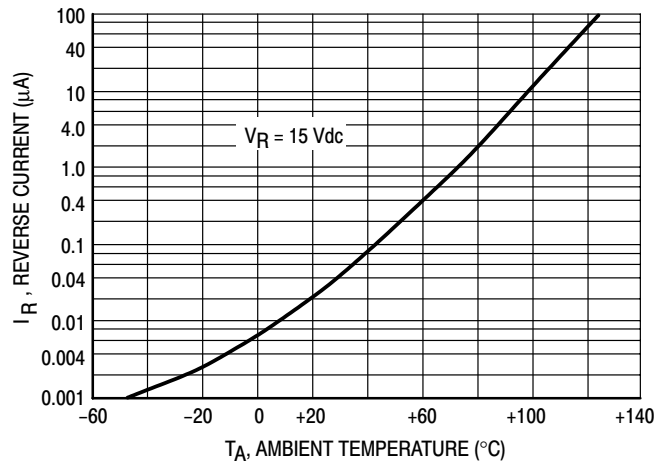
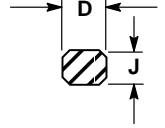
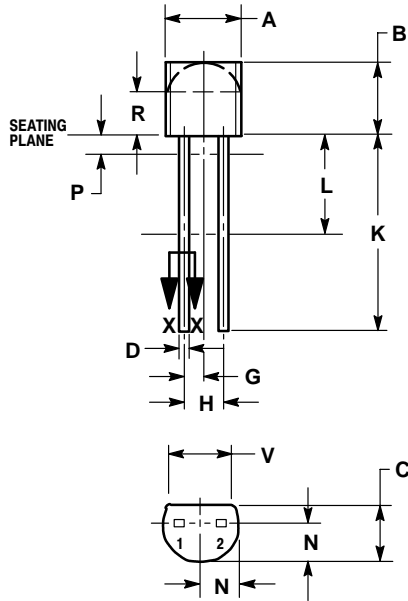


Figure 4. Leakage Current

MPN3404

PACKAGE DIMENSIONS

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




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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