MPN3404

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.

Features

- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Series Resistance @ 100 MHz: R_S = 0.7 Ω (Typ) @ I_F = 10 mAdc
- Sturdy TO−92 Style Package for Handling Ease
- Pb−Free Packages are Available*

MAXIMUM RATINGS

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

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

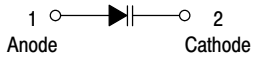
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

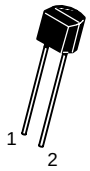
Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μAdc)	$V_{(BR)R}$	20	−	−	Vdc
Diode Capacitance (V_R = 15 Vdc, f = 1.0 MHz)	C_T	−	1.3	2.0	pF
Series Resistance (Figure 5) (I_F = 10 mAdc)	R_S	−	0.7	0.85	Ω
Reverse Leakage Current (V_R = 15 Vdc)	I_R	−	−	0.1	μAdc

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

ON Semiconductor®

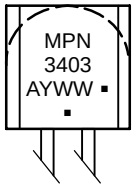
http://onsemi.com





TO−92 (TO−226AC)
CASE 182−06
STYLE 1

MARKING DIAGRAM



A = Assembly Location
Y = Year
WW = Work Week
▪ = Pb−Free Package
(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping
MPN3404	TO−92	1000 Units / Bulk
MPN3404G	TO−92 (Pb−Free)	1000 Units / Bulk

TYPICAL CHARACTERISTICS

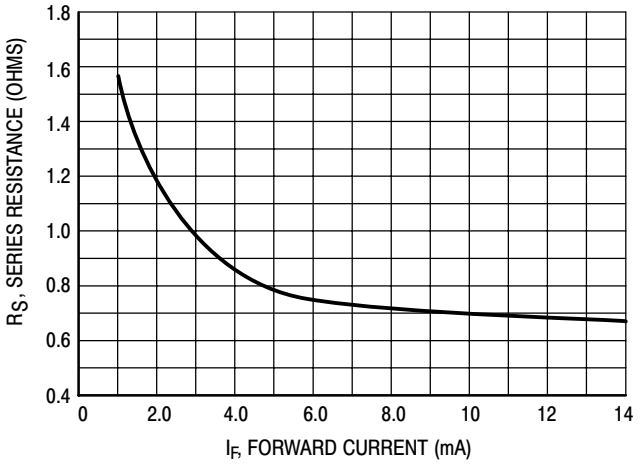


Figure 1. Series Resistance

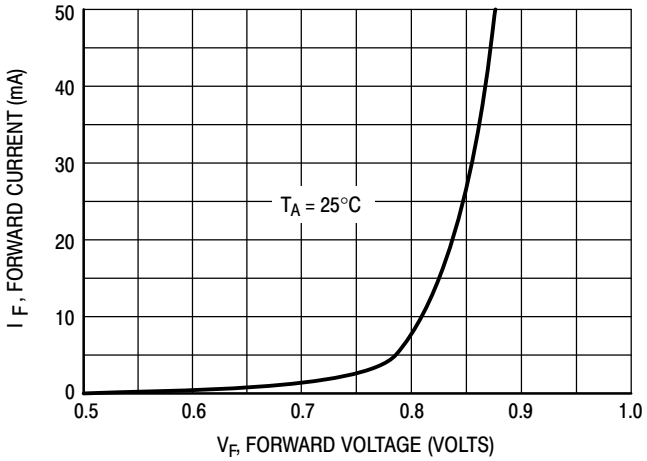


Figure 2. Forward Voltage

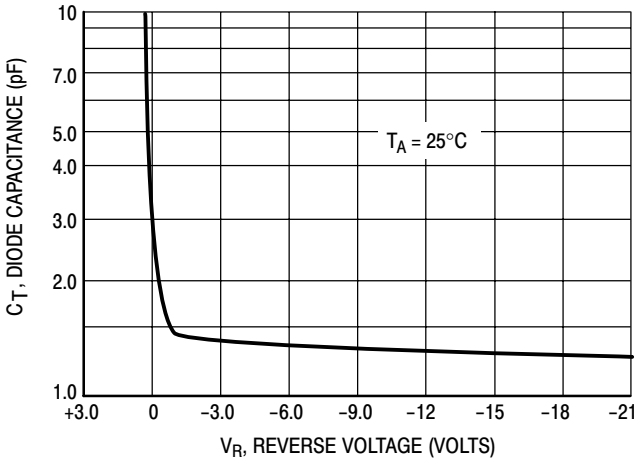


Figure 3. Diode Capacitance

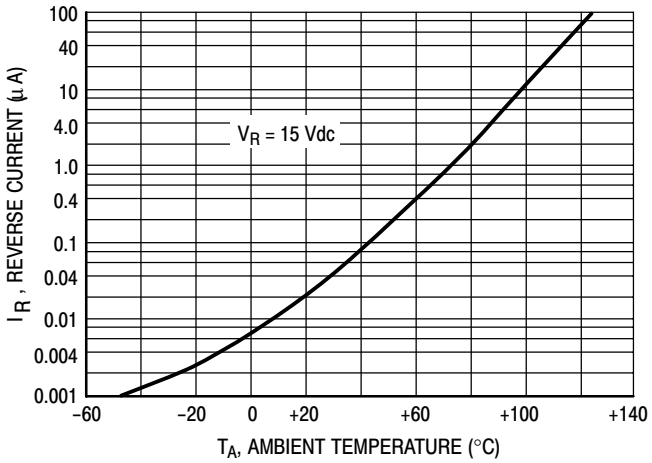
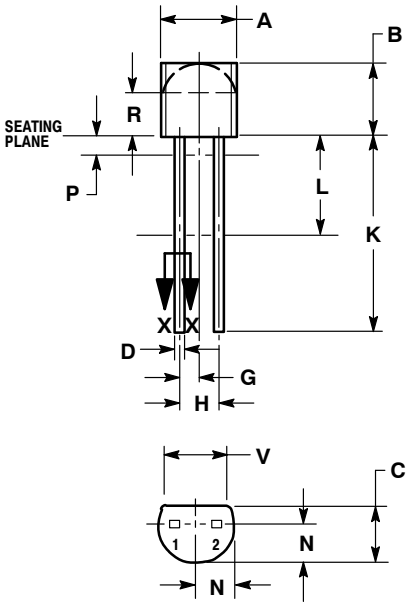


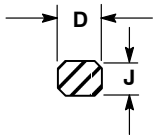
Figure 4. Leakage Current

TO−92 (TO−226)
CASE 182−06
ISSUE L

DATE 04/18/1998

SCALE 1:1





SECTION X−X

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
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	---

STYLE 1:
PIN 1. ANODE
2. CATHODE

STYLE 2:
PIN 1. CATHODE
2. ANODE

STYLE 3:
PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2

STYLE 4:
CANCELLED

STYLE 5:
PIN 1. INPUT
2. OUTPUT

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DESCRIPTION:	**TO−92 (TO−226)**		**PAGE 1 OF 1**

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