



1N6639  
1N6640  
1N6641

## FEATURES

- Available in axial leaded and surface mount configurations
- Ultra Fast Reverse Recovery Time
- Very low Capacitance
- Metallurgically Bonded
- Non-cavity glass package
- Available as JANTX, JANTXV and JANS per MIL-S-19500/609
- Replacement for 1N4150 Types

300 mAmp  
75-100 Volts  
4 nsec  
Computer  
Switching Diode

## MAXIMUM RATINGS @ 25°C

Type Number	Reverse Voltage	Working Peak Reverse Voltage	Operating Current (see note 1)	Peak Forward Surge Current (see note 2)	Thermal Resistance Junction to Lead (L=.375")	Thermal Resistance Junction to Case	Operating and Storage Temperature
Part Numbers	V <sub>BR</sub>	V <sub>RWM</sub>	I <sub>O</sub>	I <sub>FSM</sub>	R <sub>θJL</sub>	R <sub>θJC</sub>	T <sub>OP</sub> & T <sub>stg</sub>
	Volts	Volts	mA	Amps	°C/W	°C/W	°C
1N6639	100	75	300	2.5	160	50	-65 to +175
1N6639US	100	75	300	2.5	160	50	-65 to +175
1N6640	75	50	300	2.5	160	50	-65 to +175
1N6640US	75	50	300	2.5	160	50	-65 to +175
1N6641	75	50	300	2.5	160	50	-65 to +175
1N6641US	75	50	300	2.5	160	50	-65 to +175

## ELECTRICAL CHARACTERISTICS @ 25°C

Type Number	Maximum Forward Voltage V <sub>F</sub> @I <sub>F</sub>		Maximum D.C. Reverse Current I <sub>R</sub>			
	V@ 200mA	V@ 500mA	V <sub>R</sub> =75V T <sub>A</sub> =25°C nA	V <sub>R</sub> =50V T <sub>A</sub> =25°C nA	V <sub>R</sub> =75V T <sub>A</sub> =150°C μA	V <sub>R</sub> =50V T <sub>A</sub> =150°C μA
1N6639		1.2V	100		100	
1N6639US		1.2V	100		100	
1N6640	1.0V			100		100
1N6640US	1.0V			100		100
1N6641	1.1			100		100
1N6641US	1.1			100		100

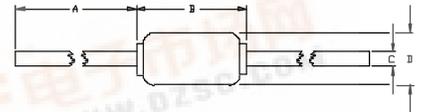
Type Number	Reverse Recovery Time (note 3)	Maximum Forward Recovery Voltage and Time I <sub>F</sub> =50mA, t <sub>r</sub> = 1ns		Maximum Junction Capacitance f=1MHz V <sub>sig</sub> =50mV(p-p)	
		V <sub>tr</sub> Volts	t <sub>tr</sub> ns	V <sub>R</sub> =0V pf	V <sub>R</sub> = 10 V pf
1N6639	4	5.0	10	2.5	
1N6639US	4	5.0	10	2.5	
1N6640	4	5.0	10	2.5	
1N6640US	4	5.0	10	2.5	
1N6641	5	5.0	10	3.0	
1N6641US	5	5.0	10	3.0	

- Note:
- (1) At maximum end cap temperature=110°C for US suffix types. Derate at 4.6mA/°C above end cap temperature=110°C. Derate axial types at 3.0mA/°C above ambient temperature=25°C.
  - (2) Test Pulse = 8.3ms, half sine wave
  - (3) I<sub>F</sub> = I<sub>R</sub> = 10mA & I(REC)=1.0mA

## MECHANICAL CHARACTERISTICS

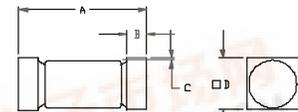
CASE STYLE: Axial Leaded

**CASE** Voidless Hermetically Sealed Hard Glass  
**LEAD** Solder dipped Copper Clad Steel  
**MARKING** Body Painted, Alpha Numeric  
**POLARITY** Cathode Band



	INCHES	MILLIMETERS
A	1.0 MIN	25.4 MIN
B	.160 MAX	4.06 MAX
C	Ø.020±.002	Ø.51±.003
D	Ø.075 MAX	Ø.90 MAX

1N6638US, 1N6642US, 1N6643US



	INCHES MAX/MIN	MILLIMETERS MAX/MIN
A	1.85/1.65	4.699/4.191
B	.020/.019	.711/.469
C	—/.003	—/.076
D	.075/.070	1.905/1.778

CASE STYLE: Surface Mount-US

**END CAP MATERIAL** Solid Silver  
**END CAP STYLE** Square  
**POLARITY** Cathode Dot on End Cap

