Santa Ana, CA
Microsemi
Progress Powered by Technology

1N6639
1N6640
1N6641

300 mAmp
75-100 Volts
4 nsec
Computer
Switching Diode

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

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_{BR}	V_{RWM}	I_O	I_{FSM}	$R_{\theta JL}$	$R_{\theta JC}$	T_{OP} & T_{stg}
	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_F@I_F		Maximum D.C. Reverse Current I_R			
	V@ 200mA	V@ 500mA	V_R=75V T_A=25°C nA	V_R=50V T_A=25°C nA	V_R=75V T_A=150°C µA	V_R=50V T_A=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

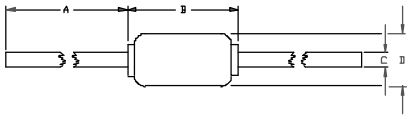
Type Number	Reverse Recovery Time (note 3)	Maximum Forward Recovery Voltage and Time If=50mA, tr = 1ns		Maximum Junction Capacitance f=1MHz V_{sig}=50mV(p-p)	
	trr	V_{fr}	t_{fr}	V_R=0V	V_R = 10 V
	ns	**Volts**	**ns**	**pf**	**pf**
1N6639	4	5.0	10	2.5	
1N6639US	4	5.0	10	2.5	
1N6640	4	5.0	10	2.5	
1N6640US	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 temperature=25°C.
(2) Test Pulse = 8.3ms, half sine wave
(3) I_F= I_R =10mA & $I_{(REC)}$=1.0mA

MECHANICAL CHARACTERISTICS

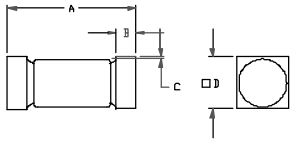
CASE STYLE: Axial Leaded

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	0.020±.002	0.51±.05
D	Ø.075 MAX	Ø1.90 MAX

1N6638US, 1N6642US, 1N6643US



	INCHES MAX/MIN	MILLIMETERS MAX/MIN
A	.185/.165	4.699/4.191
B	.028/.019	.711/.483
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