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☆JANS☆

1N6638US, 1N6642US, 1N6643US

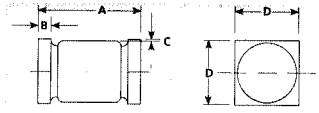


Figure 1B
Package B
Surface
Mount

	Inch		mm	
	MIN.	MAX.	MIN.	MAX.
A	.165	.185	4.191	4.699
B	.019	.028	0.483	0.711
C	.003	—	0.076	—
D	.070	.075	1.778	1.905

Features

- AVAILABLE IN AXIAL LEADED AND SURFACE MOUNT CONFIGURATIONS
- ULTRA FAST RECOVERY TIME
- VERY LOW CAPACITANCE
- METALLURGICALLY BONDED
- NON-CAVITY GLASS PACKAGE
- AVAILABLE AS JANTX AND JANTXV PER MIL-S-19500/578
- AVAILABLE AS JANS
- REPLACEMENTS FOR 1N4148, 1N4148-1, 1N4150, 1N4150-1, AND 1N914

Maximum Ratings @ 25°C

TYPE NUMBER	REVERSE VOLTAGE V_R (V)	WORKING PEAK REVERSE VOLTAGE V_{RWM} (V)	OPERATING CURRENT I_O (Note 1) (mA)	PEAK FORWARD SURGE CURRENT I_{FSM} (Note 2) (A)	$R_{\theta JL}$ L = .375" (°C/W)	$R_{\theta JEC}$ (°C/W)	T_{OP} T_{stg} (°C)
1N6638	150	125	300	2.5	160	50	-65 to +175
1N6638US	150	125	300	2.5			
1N6642	100	75	300	2.5	160	50	
1N6642US	100	75	300	2.5			
1N6643	75	50	300	2.5	160	50	
1N6643US	75	50	300	2.5			

Note 1: At maximum end cap temperature = 110°C for US suffix types. Derate at 4.6 mA/°C above end cap temperature = 110°C. Derate axial types at 3.0 mA/°C above ambient temperature = 25°C.
Note 2: Test pulse = 8.3ms, half sine wave.

Electrical Characteristics @ 25°C

TYPE NUMBER	MAXIMUM FORWARD VOLTAGE V_F @ I_F		MAXIMUM D.C. REVERSE CURRENT I_R			
			V_R=20V	V_R= V_{RWM}	V_R=20V T_A = 150°C	V_R=V_{RWM} T_A = 150°C
	V @ mA		nA	µA	µA	µA
1N6638	0.8V @ 10mA	1.1V @ 200mA	25	0.5	40	100
1N6638US	0.8V @ 10mA	1.1V @ 200mA	25	0.5	40	100
1N6642	1.0V @ 10mA	1.2V @ 100mA	25	0.5	50	100
1N6642US	1.0V @ 10mA	1.2V @ 100mA	25	0.5	50	100
1N6643	1.0V @ 10mA	1.2V @ 100mA	50	0.5	75	160
1N6643US	1.0V @ 10mA	1.2V @ 100mA	50	0.5	75	160

TYPE NUMBER	REVERSE RECOVERY TIME t_{rr} Note 1	MAXIMUM FORWARD RECOVERY VOLTAGE AND TIME I_F = 50mA, t_r = 1ns		MAXIMUM JUNCTION CAPACITANCE f = 1MHz Vsig = 50mV (p-p)	
		V_{fr}	t_{fr}	V_R=0V	V_R=1.5V
	ns	V	ns	pf	pf
1N6638	4.5	5.0	20	2.0	1.4
1N6638US	4.5	5.0	20	2.0	1.4
1N6642	5.0	5.0	20	5.0	2.8
1N6642US	5.0	5.0	20	5.0	2.8
1N6643	6.0	5.0	20	5.0	2.8
1N6643US	6.0	5.0	20	5.0	2.8

NOTE 1: Reverse Recovery Time Test Conditions:
I_F = I_R = 10mAdc, $i_{R(REC)}$ = 1.0mAdc, C = 3pF, R_L = 100 ohms

1N6638, 1N6642, 1N6643

COMPUTER SWITCHING DIODES

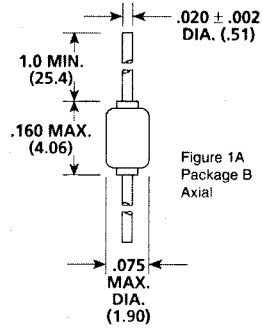


Figure 1A
Package B
Axial

Mechanical Characteristics

AXIAL LEADED DEVICES

CASE: Voidless Hermetically Sealed Hard Glass.

LEAD MATERIAL: Solder Dipped Copper Clad Steel.

MARKING: Body Painted, Alpha Numeric.

POLARITY: Cathode Band.

SURFACE MOUNT DEVICES

CASE: Voidless Hermetically Sealed Hard Glass.

END CAP MATERIAL: Solid Silver.

END CAP CONFIGURATION: Square.

POLARITY: Cathode Dot on End Cap.

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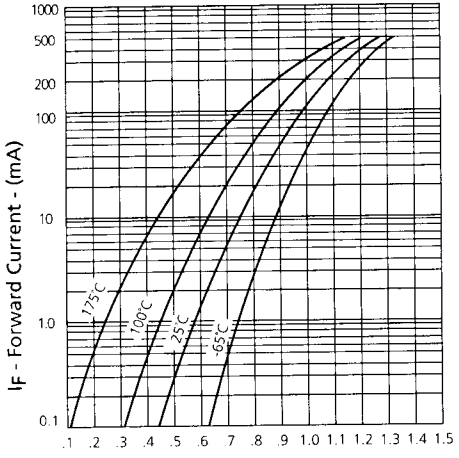


FIGURE 2
1N6638 & US
Typical Forward Current
vs Forward Voltage

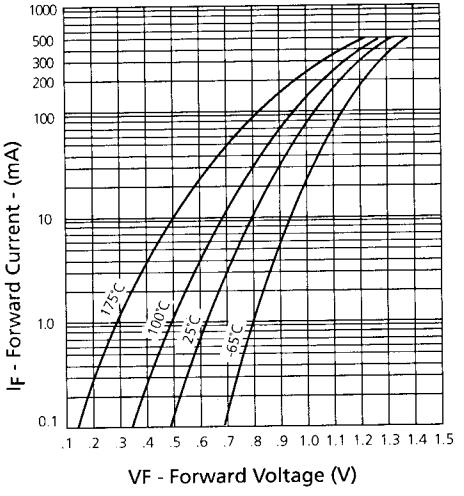


FIGURE 3
1N6642, 1N6643, & US
Typical Forward Current
vs Forward Voltage

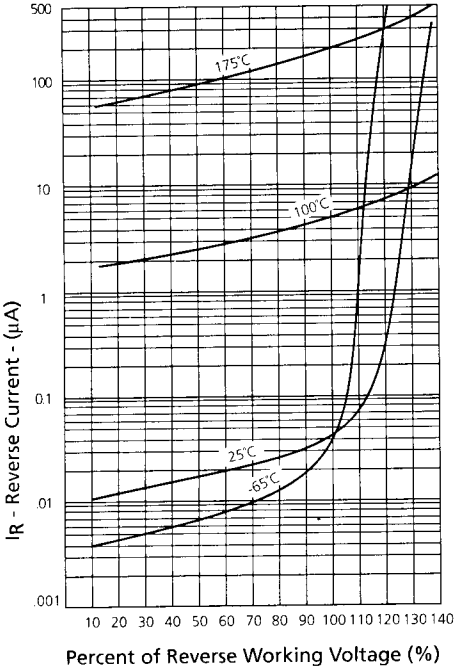


FIGURE 4
1N6638, 1N6642, & US
Typical Reverse Current
vs Reverse Voltage

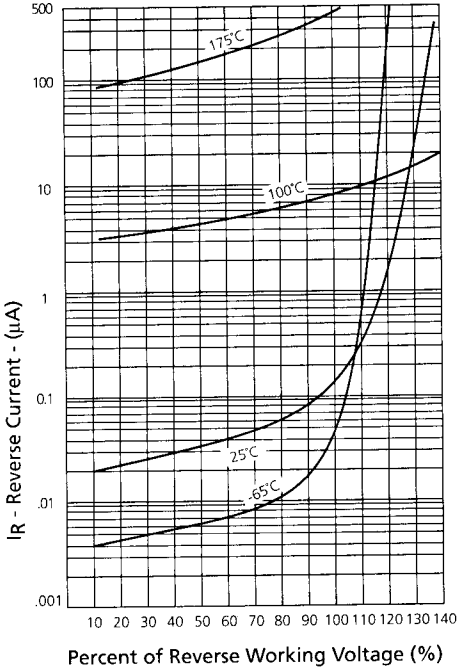


FIGURE 5
1N6643 & US
Typical Reverse Current
vs Reverse Voltage