

HIGH-RELIABILITY PRODUCTS

Features

- Low reverse leakage current
- Hermetically sealed in fused metal oxide
- Good thermal shock resistance
- Low forward voltage drop

These products are qualified to MIL-PRF-19500/578.

They can be supplied fully released as JAN, JANTX, JANTXV and JANS.

Quick reference data

$$V_{BR} = 75 - 150V$$

$$t_{rr} = 4.5 - 6.0ns$$

$$I_o = 300mA, T_A = 75^{\circ}C$$

$$V_F = 1.1 - 1.2V$$

Absolute Maximum Rating

Electrical specifications @ $T_A = 25^{\circ}C$ unless otherwise specified.

Parameter	Symbol	1N6638	1N6642	1N6643	Units
Breakdown Voltage	V_{BR}	150	100	75	V
Working Reverse Voltage	V_{RWM}	125	75	50	V
Operating Current @75 °C , lead length 0.375"	I_o	300	300	300	mA
Non-Repetitive Surge Current (tp = 8.3ms, @25 °C)	I_{FSM}	2.5	2.5	2.5	A
Storage Temperature Range	T_{STG}	-65 to +175			°C

Electrical Characteristics (T=25°C unless otherwise specified)

Parameter	Symbol	1N6638	1N6642	1N6643	Units
Forward Voltage Drop max. at 10mA, $T_j = 25^\circ\text{C}$	V_{F1}	0.8	0.8	0.8	V
Forward Voltage Drop max. $T_j = 25^\circ\text{C}$	V_{F2}	1.1 @ $I_F = 200\text{mA}$	1.2 @ $I_F = 100\text{mA}$	1.2 @ $I_F = 100\text{mA}$	V
Reverse Current max. I_{R1} @ $V_R = 20\text{V}$ I_{R2} @ $V_R = V_{RWM}$ I_{R3} @ $V_R = 20\text{V}, T_A = 150^\circ\text{C}$ I_{R4} @ $V_R = V_{RWM}, T_A = 150^\circ\text{C}$	I_{R1} I_{R2} I_{R3} I_{R4}	35 500 50 100	25 500 50 100	50 500 75 100	nA nA uA uA
Forward Recovery Time max. $I_F = 200\text{mA}$	t_{fr}	20	20	20	ns
Reverse Recovery Time max. $I_{RM} = I_F = 10\text{mA}$	t_{rr}	4.5	5.0	6.0	ns
Junction Capacitance typ. $V_R = 0\text{V}$	C_{T1}	2.5	5.0	5.0	pF

Thermal Characteristics

Parameter	Symbol	1N6638	1N6642	1N6643	Units
Thermal Resistance-Junction to Lead Lead length = 0.375"	$R_{\theta JL}$	150			$^\circ\text{C}/\text{W}$

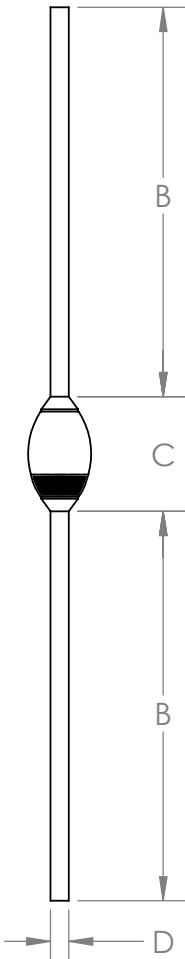
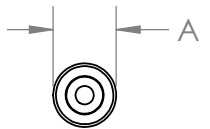
Ordering Information

Part Number	Description
1N6638 1N6642 1N6643	Axial leaded hermetically sealed ⁽¹⁾

Note:

(1) Available in bulk and tape and reel packaging. Please consult factory for quantities.

Outline Drawing



Dimensions				
DIM	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.056	0.08	1.42	2.03
B	1.0	1.5	25.4	38.1
C	0.13	0.18	3.3	4.57
D	0.018	0.022	0.46	0.56



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