

New Jersey Semi-Conductor Products, Inc.

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MAXIMUM RATINGS

Operating Temperature: -65°C to $+175^{\circ}\text{C}$
Storage Temperature: -65°C to $+175^{\circ}\text{C}$
Power Dissipation: 500 mW @ $T_L = +75^{\circ}\text{C}$ @ $L = 3/8"$
Power Derating: 5mW/ $^{\circ}\text{C}$ above $T_L = +75^{\circ}\text{C}$
Forward Voltage: 1.4V dc @ $I_F = 1\text{A}$ dc (Pulsed)

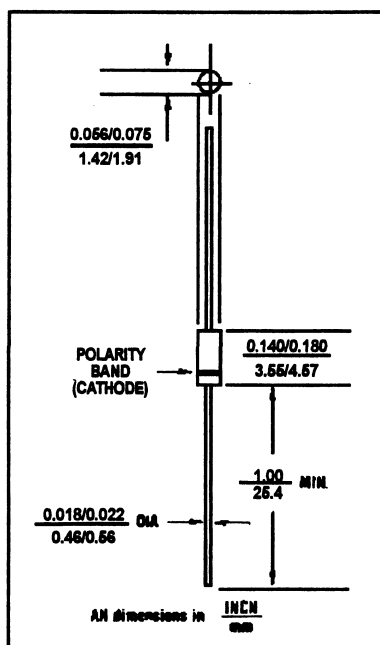
1N6309
THRU
1N6320

- 500 mW ZENER DIODES
- NON CAVITY CONSTRUCTION
- METALLURGICALLY BONDED

ELECTRICAL CHARACTERISTICS @ 25°C , unless otherwise specified

TYPE	V_{Z2} NOM. $\pm 5\%$ @ I_{Z2}	V_{Z1} MIN. @ I_{Z1} 250 μA	I_{Z2} TEST CURRENT	Z_Z @ I_{Z2}	Z_{ZK} @ 250 μA	I_{ZM}	V_Z (reg) ΔV_Z (1)	I_{ZSM} SURGE	V_R	I_{R1} @ 25°C	I_{R2} @ $T_A =$ 150°C	N_D @ 250 μA 1-3 kHz
	VOLTS	VOLTS	mA	OHMS	OHMS	mA	VOLTS	AMPS	VOLTS	μA	μA	$\mu\text{V}/\sqrt{\text{Hz}}$
1N6309	2.4	1.1	20	30	1200	177	1.5	2.5	1.0	100	200	1.0
1N6310	2.7	1.2	20	30	1300	157	1.5	2.2	1.0	60	150	1.0
1N6311	3.0	1.3	20	29	1400	141	1.5	2.0	1.0	30	100	1.0
1N6312	3.3	1.5	20	24	1400	128	1.6	1.8	1.0	5.0	20	1.0
1N6313	3.6	1.8	20	22	1400	117	1.6	1.65	1.0	3.0	12	1.0
1N6314	3.9	2.0	20	20	1700	108	1.6	1.5	1.0	2.0	12	1.0
1N6315	4.3	2.4	20	18	1400	99	0.9	1.4	1.0	2.0	12	1.0
1N6316	4.7	2.8	20	16	1500	90	0.5	1.27	1.5	5.0	12	1.0
1N6317	5.1	3.3	20	14	1300	83	0.4	1.17	2.0	5.0	12	1.0
1N6318	5.6	4.3	20	8.0	1200	76	0.4	1.10	2.5	5.0	10	2.0
1N6319	6.2	5.2	20	3.0	800	68	0.3	0.97	3.5	5.0	10	5.0
1N6320	6.8	6.0	20	3.0	400	63	0.35	1.23	4.0	2.0	50	5.0

NOTE 1 $\Delta V_Z = V_Z @ 20 \text{ mAdc}$ minus $V_Z @ 2 \text{ mAdc}$



DESIGN DATA

CASE: Hermetically sealed, Glass "D"

LEAD MATERIAL: Copper clad steel

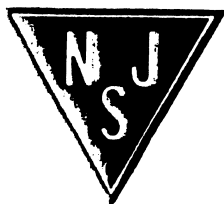
LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JL}$): 250
 $^{\circ}\text{C/W}$ maximum

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 15
 $^{\circ}\text{C/W}$ maximum

POLARITY: Diode to be operated with
the banded (cathode) end positive.

MOUNTING POSITION: Any



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