

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
Power Dissipation: 500 mW @ $T_L = +75^\circ\text{C}$ @ $L = 3/8"$
Power Derating: 5mW/°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. ±5% @ I _{Z2}	V _{Z1} MIN. @ I _{Z1} 250µ A	I _{Z2} TEST CURRENT	Z _Z @ I _{Z2}	Z _{ZK} @ 250µ A	I _{ZM}	V _Z (reg) Δ V _Z (1)	I _{ZSM} SURGE	V _R	I _{R1} @ 25°C	I _{R2} @ TA=150°C	N _D @250 µA 1-3 kHz
	VOLTS	VOLTS	mA	OHMS	OHMS	mA	VOLTS	AMPS	VOLTS	µ A	µ A	µ V/√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 Δ V_Z = V_Z @ 20 mAdc minus V_Z @ 2 mAdc

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: (R_{ΘJL}): 250 °C/W maximum

THERMAL IMPEDANCE: (Z_{ΘJX}): 15 °C/W maximum

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

MOUNTING POSITION: Any

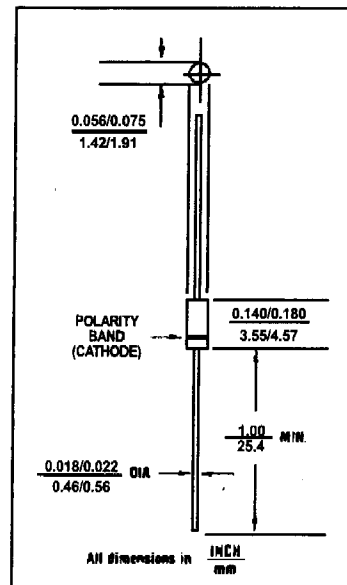


FIGURE 1

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