- AVAILABLE IN JAN, JANTX, JANTXV, AND JANS PER MIL-PRF-19500/533
- 500 mW ZENER DIODES
- NON CAVITY CONSTRUCTION
- METALLURGICALLY BONDED

1N6309 THRU 1N6320

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
Power Dissapation: 500 mW @ T_L=+75°C @ L=$^3/_8$"
Power Derating: 5mW/°C above T_L=+75°C
Forward Voltage: 1.4V dc @ I_F=1A dc (Pulsed)

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 VZ (1)	I_{ZSM} SURGE	V_R	I_{R1} @ 25ºC	I_{R2} @ TA= 150ºC	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

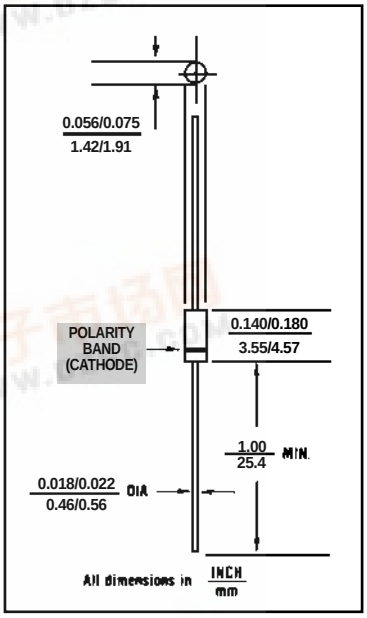


FIGURE 1

DESIGN DATA

CASE: Hermetically sealed, Glass "D" Body per MIL-PRF- 19500/533. D-5D

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\Theta JL}$): 250 ˚C/W maximum

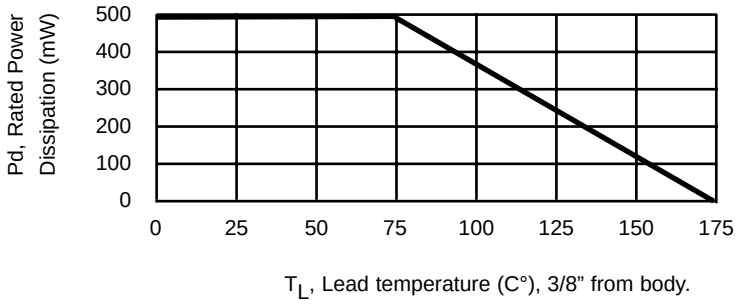
THERMAL IMPEDANCE: ($Z_{\Theta JX}$): 15 ˚C/W maximum

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

MOUNTING POSITION: Any

COMPENSATED DEVICES INCORPORATED
22 COREY STREET, MELROSE, MASSACHUSETTS 02176
PHONE (781) 665-1071 FAX (781) 665-7379

FIGURE 2



POWER DERATING CURVE

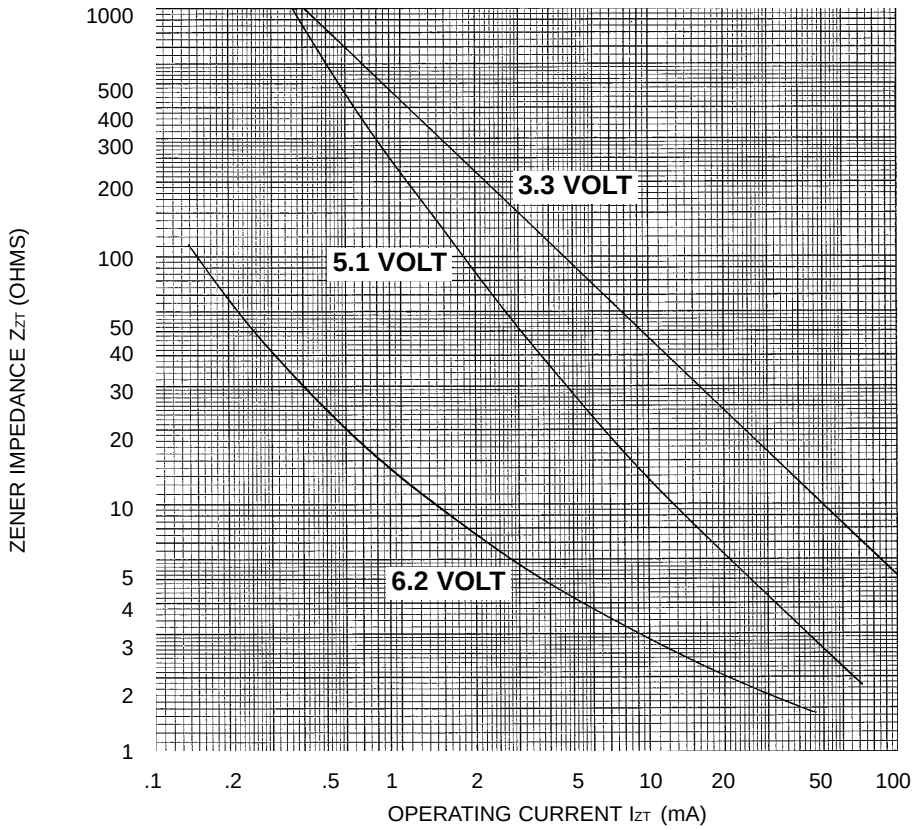


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT