- **1N4099-1 THRU 1N4135-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/435**
- **LOW CURRENT OPERATION AT 250 μA**
- **LOW REVERSE LEAKAGE AND LOW NOISE CHARACTERISTICS**
- **METALLURGICALLY BONDED**

1N4099 thru 1N4135 and 1N4099-1 thru 1N4135-1

MAXIMUM RATINGS

Junction and Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ +50°C
Power Derating: 4 mW / °C above +50°C
Forward Voltage at 200 mA: 1.1 Volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

JEDEC TYPE NUMBER	NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} (Note 1)	ZENER TEST CURRENT I_{ZT}	MAXIMUM ZENER IMPEDANCE Z_{ZT} (Note 2)	MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_R		MAXIMUM NOISE DENSITY N_D @ I_{ZT}	MAXIMUM ZENER CURRENT I_{ZM}
	VOLTS	μA	OHMS	μA	VOLTS	μV/ √Hz	mA
1N4099	6.8	250	200	10	5.17	40	56
1N4100	7.5	250	200	10	5.70	40	51
1N4101	8.2	250	200	1.0	6.24	40	46
1N4102	8.7	250	200	1.0	6.61	40	44
1N4103	9.1	250	200	1.0	6.92	40	42
1N4104	10	250	200	1.0	7.60	40	38
1N4105	11	250	200	.05	8.44	40	35
1N4106	12	250	200	.05	9.12	40	32
1N4107	13	250	200	.05	9.87	40	29
1N4108	14	250	200	.05	10.65	40	27
1N4109	15	250	100	.05	11.40	40	25
1N4110	16	250	100	.05	12.15	40	24
1N4111	17	250	100	.05	12.92	40	22
1N4112	18	250	100	.05	13.67	40	21
1N4113	19	250	150	.05	14.44	40	20
1N4114	20	250	150	.01	15.20	40	19
1N4115	22	250	150	.01	16.72	40	17
1N4116	24	250	150	.01	18.25	40	16
1N4117	25	250	150	.01	19.00	40	15
1N4118	27	250	150	.01	20.46	40	14
1N4119	28	250	200	.01	21.28	40	14
1N4120	30	250	200	.01	22.80	40	13
1N4121	33	250	200	.01	25.08	40	12
1N4122	36	250	200	.01	27.38	40	11
1N4123	39	250	200	.01	29.65	40	9.8
1N4124	43	250	250	.01	32.65	40	8.9
1N4125	47	250	250	.01	35.75	40	8.1
1N4126	51	250	300	.01	38.76	40	7.5
1N4127	56	250	300	.01	42.60	40	6.7
1N4128	60	250	400	.01	45.60	40	6.4
1N4129	62	250	500	.01	47.10	40	6.1
1N4130	68	250	700	.01	51.68	40	5.6
1N4131	75	250	700	.01	57.00	40	5.1
1N4132	82	250	800	.01	62.32	40	4.6
1N4133	87	250	1000	.01	66.12	40	4.4
1N4134	91	250	1200	.01	69.16	40	4.2
1N4135	100	250	1500	.01	76.00	40	3.8

NOTE 1 The JEDEC type numbers shown above have a Zener voltage tolerance of ± 5% of the nominal Zener voltage. Vz is measured with the device junction in thermal equilibrium at an ambient temperature of 25°C ± 3°C. A "C" suffix denotes a ± 2% tolerance and a "D" suffix denotes a ± 1% tolerance.

NOTE 2 Zener impedance is derived by superimposing on lZT, A 60 Hz rms a.c. current equal to 10% of lZT (25 μA a.c.).

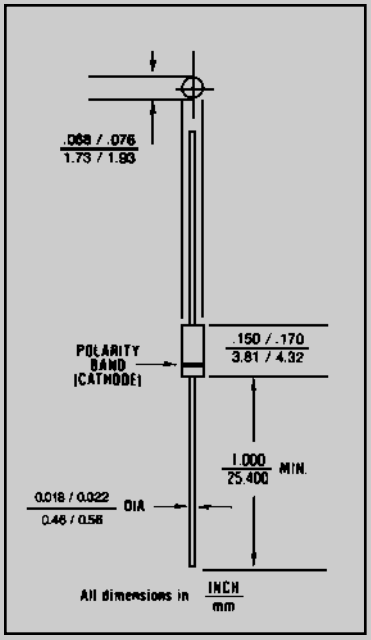

FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case. DO – 35 outline.

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\Theta JEC}$): 250 °C/W maximum at L = .375 inch

THERMAL IMPEDANCE: ($Z_{\Theta JX}$): 35 °C/W maximum

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

MOUNTING POSITION: ANY.

Microsemi

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WEBSITE: http://www.microsemi.com

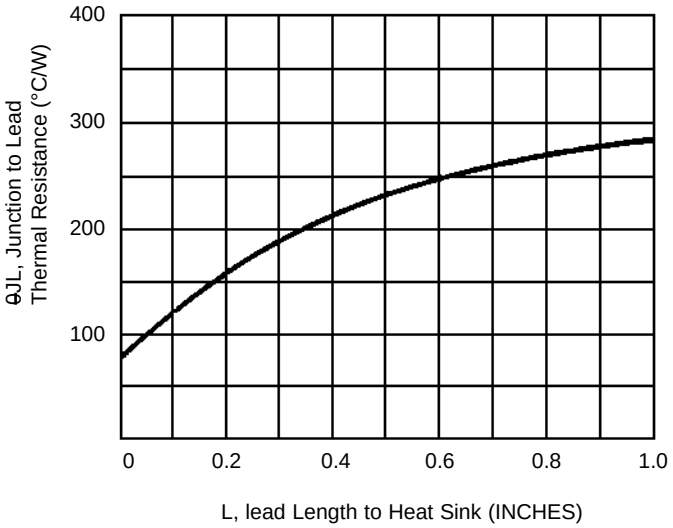

FIGURE 2

TYPICAL THERMAL RESISTANCE

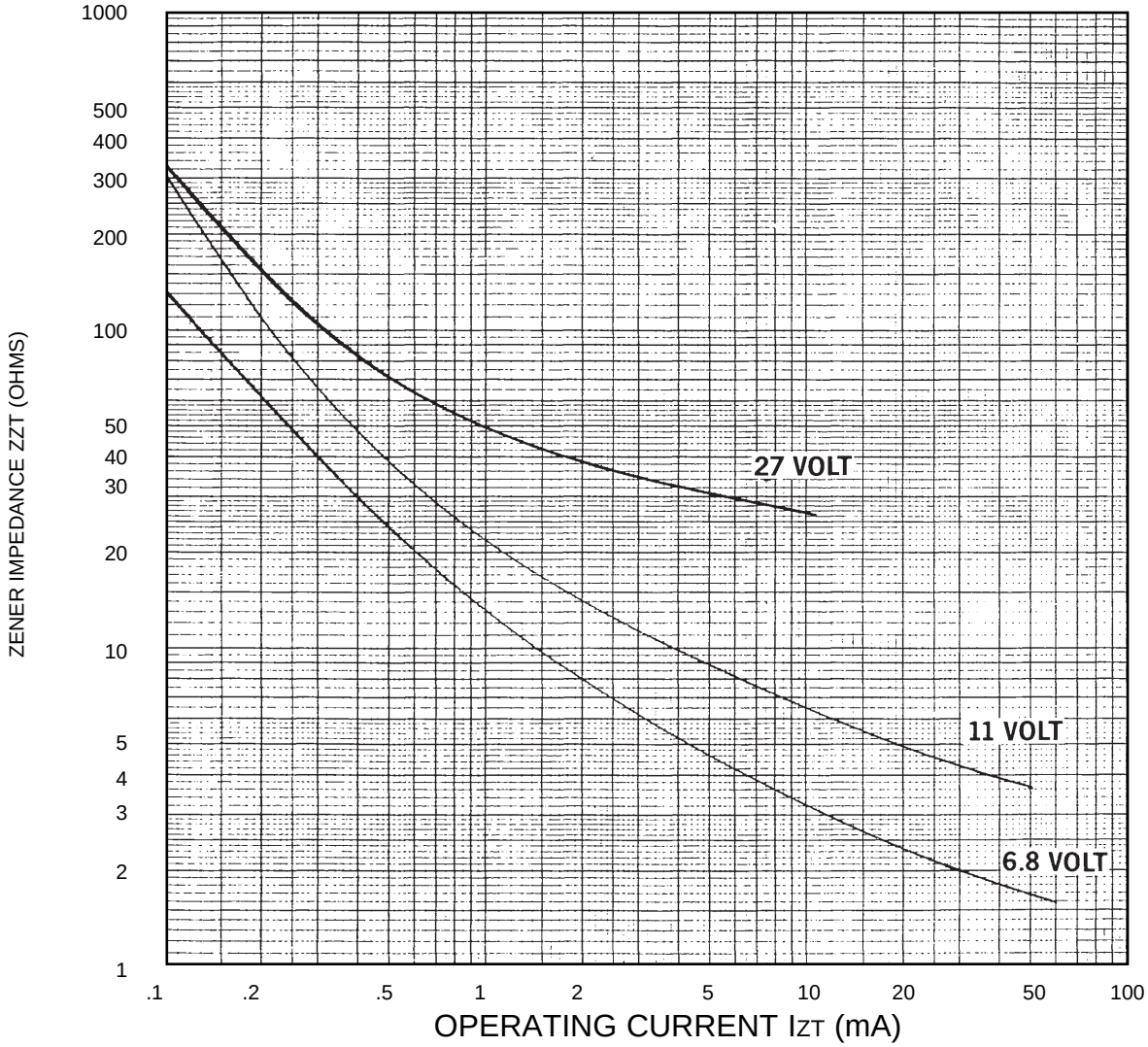

FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT