

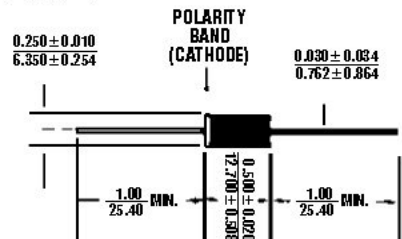
- 12.4 THRU 200 VOLT NOMINAL ZENER VOLTAGES  $\pm 5\%$
- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- EFFECTIVE TEMPERATURE COEFFICIENTS OF 0.005%/°C AND 0.002%/°C
- HERMETICALLY SEALED, METALLURGICALLY BONDED, DOUBLE PLUG SUBASSEMBLIES ENCAPSULATED IN A PLASTIC CASE

1N4057  
thru  
1N4085A

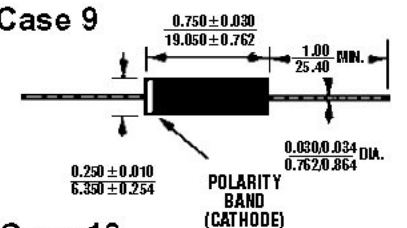
JEDEC TYPE NUMBER	NOMINAL ZENER VOLTAGE (Note 1)	TEST CURRENT	MAXIMUM ZENER IMPEDANCE (Note 2)	EFFECTIVE TEMPERATURE COEFFICIENT (Note 3)	MAXIMUM MILLIVOLT CHANGE	TEMPERATURE RANGE	CASE
	VOLTS						
1N4057	12.4	10	25	.005	95	-55 to 100°C	8
1N4057A	12.4	10	25	.002	37.5	-55 to 100°C	8
1N4058	12.6	10	30	.005	112	-55 to 100°C	8
1N4058A	12.6	10	30	.002	45	-55 to 100°C	8
1N4059	16.8	10	30	.005	130	-55 to 100°C	8
1N4059A	16.8	10	30	.002	52.5	-55 to 100°C	8
1N4060	18.5	10	30	.005	142	-55 to 100°C	8
1N4060A	18.5	10	30	.002	57	-55 to 100°C	8
1N4061	21	10	35	.005	163	-55 to 100°C	8
1N4061A	21	10	35	.002	65	-55 to 100°C	8
1N4062	23	10	40	.005	178	-55 to 100°C	8
1N4062A	23	10	40	.002	71	-55 to 100°C	8
1N4063	27	10	45	.005	209	-55 to 100°C	8
1N4063A	27	10	45	.002	83	-55 to 100°C	8
1N4064	30	10	50	.005	232	-55 to 100°C	8
1N4064A	30	10	50	.002	93	-55 to 100°C	8
1N4065	33	10	55	.005	255	-55 to 100°C	8
1N4065A	33	10	55	.002	102	-55 to 100°C	8
1N4066	37	7.5	80	.005	287	-55 to 100°C	8
1N4066A	37	7.5	80	.002	111	-55 to 100°C	8
1N4067	43	7.5	90	.005	333	-55 to 100°C	8
1N4067A	43	7.5	90	.002	133	-55 to 100°C	8
1N4068	47	7.5	100	.005	364	-55 to 100°C	8
1N4068A	47	7.5	100	.002	142	-55 to 100°C	8
1N4069	51	7.5	110	.005	395	-55 to 100°C	9
1N4069A	51	7.5	110	.002	158	-55 to 100°C	9
1N4070	56	7.5	120	.005	435	-55 to 100°C	9
1N4070A	56	7.5	120	.002	174	-55 to 100°C	9
1N4071	62	7.5	135	.005	480	-55 to 100°C	9
1N4071A	62	7.5	135	.002	192	-55 to 100°C	9
1N4072	68	5.0	230	.005	528	-55 to 100°C	9
1N4072A	68	5.0	230	.002	211	-55 to 100°C	9
1N4073	75	5.0	250	.005	582	-55 to 100°C	9
1N4073A	75	5.0	250	.002	234	-55 to 100°C	9
1N4074	82	5.0	270	.005	637	-55 to 100°C	9
1N4074A	82	5.0	270	.002	253	-55 to 100°C	9
1N4075	87	5.0	290	.005	675	-55 to 100°C	9
1N4075A	87	5.0	290	.002	270	-55 to 100°C	9
1N4076	91	5.0	310	.005	707	-55 to 100°C	9
1N4076A	91	5.0	310	.002	282	-55 to 100°C	9
1N4077	100	5.0	340	.005	775	-55 to 100°C	9
1N4077A	100	5.0	340	.002	310	-55 to 100°C	9
1N4078	105	2.5	700	.005	815	-55 to 100°C	9
1N4078A	105	2.5	700	.002	325	-55 to 100°C	9
1N4079	110	2.5	740	.005	850	-55 to 100°C	9
1N4079A	110	2.5	740	.002	340	-55 to 100°C	9
1N4080	120	2.5	800	.005	930	-55 to 100°C	9
1N4080A	120	2.5	800	.002	372	-55 to 100°C	9
1N4081	130	2.5	840	.005	1000	-55 to 100°C	10
1N4081A	130	2.5	840	.002	404	-55 to 100°C	10
1N4082	140	2.5	960	.005	1000	-55 to 100°C	10
1N4082A	140	2.5	960	.002	432	-55 to 100°C	10
1N4083	150	2.5	1020	.005	1160	-55 to 100°C	10
1N4083A	150	2.5	1020	.002	464	-55 to 100°C	10
1N4084	175	2.5	1150	.005	1360	-55 to 100°C	10
1N4084A	175	2.5	1150	.002	540	-55 to 100°C	10
1N4085	200	2.5	1350	.005	1550	-55 to 100°C	10
1N4085A	200	2.5	1350	.002	620	-55 to 100°C	10

\* JEDEC Registered Data

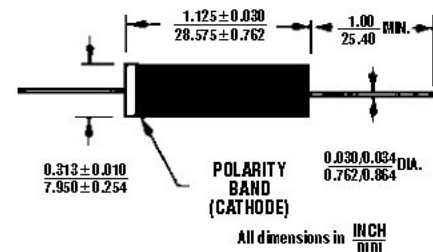
### Case 8



### Case 9



### Case 10



## FIGURE 1 DESIGN DATA

**CASE:** Non-conductive epoxy

**LEAD MATERIAL:** Copper clad steel.

**LEAD FINISH:** Tin/Lead

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

**MOUNTING POSITION:** ANY.



6 LAKE STREET, LAWRENCE, MASSACHUSETTS 01841  
PHONE (978) 620-2600 FAX (978) 689-0803  
WEBSITE: <http://www.microsemi.com>

# 1N4057 thru 1N4085A

## MAXIMUM RATINGS

Operating Temperature: -65°C to +150°C

Storage Temperature: -65°C to +150°C

DC Power Dissipation: **Case 8** 1.5 Watts @ +25°C

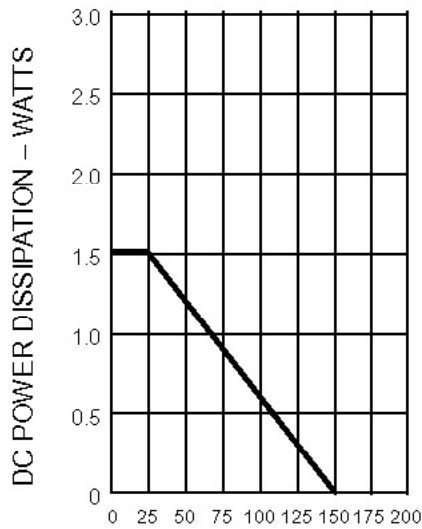
**Case 9** 2.0 Watts @ +25°C

**Case 10** 2.5 Watts @ +25°C

Power Derating: **Case 8** 12 mW / °C above +25°C

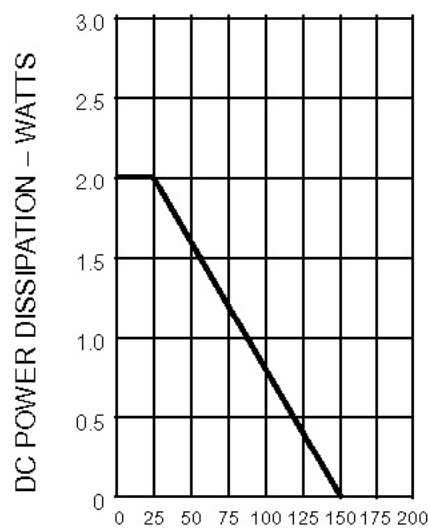
**Case 9** 16 mW / °C above +25°C

**Case 10** 20 mW / °C above +25°C



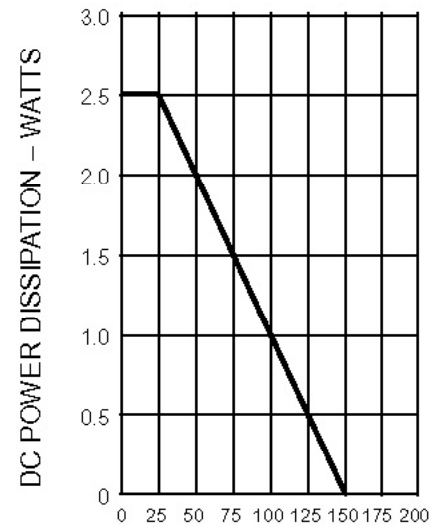
$T_L$ , Lead temperature (C°)  
3/8" from body

**CASE 8**



$T_L$ , Lead temperature (C°) \ \ 3/8" from body

**CASE 9**



$T_L$ , Lead temperature (C°)  
3/8" from body

**CASE 10**

**FIGURE 2**  
**POWER DERATING CURVE**

**NOTE 1** Zener voltage range equals nominal Zener voltage  $\pm$  5%.

**NOTE 2** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

**NOTE 3** The "maximum millivolt change" (see Table) is the maximum allowable change observed over the entire temperature range, per JEDEC standard No. 5.