

**Microsemi Corp.**

The diode experts

SANTA ANA, CA

SCOTTSDALE, AZ

For more information call:  
(602) 941-6300

**1N4057  
thru  
1N4085A**

## FEATURES

- ZENER VOLTAGE 12.4V to 200V
- TEMPERATURE COEFFICIENT RANGE: 0.005%/°C to 0.002%/°C

## MAXIMUM RATINGS

See Electrical Characteristics Below

DC Power Dissipation: Case CC: 1.5W

At 25°C derate

Case DD: 2W

Linearly to Zero

Case EE: 2.5W

at +150°C

**HIGH VOLTAGE  
TEMPERATURE  
COMPENSATED  
ZENER DIODES**

## ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

JEDEC TYPE NUMBER	ZENER VOLTAGE $V_Z$ at $I_Z$ VOLTS ( $\pm 5\%$ ) (See Note 1)	ZENER TEST CURRENT $I_Z$ MA	MAXIMUM DYNAMICS IMPEDANCE $z_o$ (1.) OHMS	MAXIMUM TEMPER- ATURE COEFFICIENT (See Note 2) $\alpha_{VZ}$	$\pm \%$ / °C	$\pm$ mV / °C	TEMPERATURE RANGE °C	CASE TYPE NO.
1N4057	12.4	10.0	25	0.005		62	55 to +25 to +100	CC
1N4057A	12.4	10.0	25	0.002		25	55 to +25 to +100	CC
1N4058	14.6	10.0	30	0.005		73	55 to +25 to +100	CC
1N4058A	14.6	10.0	30	0.002		29	55 to +25 to +100	CC
1N4059	16.8	10.0	30	0.005		84	55 to +25 to +100	CC
1N4059A	16.8	10.0	30	0.002		34	55 to +25 to +100	CC
1N4060	18.5	10.0	30	0.005		92	55 to +25 to +100	CC
1N4060A	18.5	10.0	30	0.002		37	55 to +25 to +100	CC
1N4061	21	10.0	35	0.005		105	55 to +25 to +100	CC
1N4061A	21	10.0	35	0.002		42	55 to +25 to +100	CC
1N4062	23	10.0	40	0.005		115	55 to +25 to +100	CC
1N4062A	23	10.0	40	0.002		46	55 to +25 to +100	CC
1N4063	27	10.0	45	0.005		135	55 to +25 to +100	CC
1N4063A	27	10.0	45	0.002		54	55 to +25 to +100	CC
1N4064	30	10.0	50	0.005		150	55 to +25 to +100	CC
1N4064A	30	10.0	50	0.002		60	55 to +25 to +100	CC
1N4065	33	10.0	55	0.005		165	55 to +25 to +100	CC
1N4065A	33	10.0	55	0.002		66	55 to +25 to +100	CC
1N4066	37	7.5	80	0.005		185	55 to +25 to +100	CC
1N4066A	37	7.5	80	0.002		74	55 to +25 to +100	CC
1N4067	43	7.5	90	0.005		215	55 to +25 to +100	CC
1N4067A	43	7.5	90	0.002		86	55 to +25 to +100	CC
1N4068	47	7.5	100	0.005		235	55 to +25 to +100	CC
1N4068A	47	7.5	100	0.002		94	55 to +25 to +100	CC
1N4069	51	7.5	110	0.005		255	55 to +25 to +100	DD
1N4069A	51	7.5	110	0.002		102	55 to +25 to +100	DD
1N4070	56	7.5	120	0.005		280	55 to +25 to +100	DD
1N4070A	56	7.5	120	0.002		112	55 to +25 to +100	DD
1N4071	62	7.5	135	0.005		310	55 to +25 to +100	DD
1N4071A	62	7.5	135	0.002		124	55 to +25 to +100	DD
1N4072	68	5.0	240	0.005		340	55 to +25 to +100	DD
1N4072A	68	5.0	230	0.002		136	55 to +25 to +100	DD
1N4073	75	5.0	250	0.005		375	55 to +25 to +100	DD
1N4073A	75	5.0	250	0.002		150	55 to +25 to +100	DD
1N4074	82	5.0	270	0.005		410	55 to +25 to +100	DD
1N4074A	82	5.0	270	0.002		164	55 to +25 to +100	DD
1N4075	87	5.0	290	0.005		435	55 to +25 to +100	DD
1N4075A	87	5.0	290	0.002		174	55 to +25 to +100	DD
1N4076	91	5.0	310	0.005		455	55 to +25 to +100	DD
1N4076A	91	5.0	310	0.002		182	55 to +25 to +100	DD
1N4077	100	5.0	310	0.005		500	55 to +25 to +100	DD
1N4077A	100	5.0	340	0.002		200	55 to +25 to +100	DD
1N4078	105	2.5	700	0.005		525	55 to +25 to +100	DD
1N4078A	105	2.5	700	0.002		210	55 to +25 to +100	DD
1N4079	110	2.5	740	0.005		550	55 to +25 to +100	DD
1N4079A	110	2.5	740	0.002		220	55 to +25 to +100	DD
1N4080	120	2.5	800	0.005		600	55 to +25 to +100	DD
1N4080A	120	2.5	800	0.002		240	55 to +25 to +100	DD
1N4081	130	2.5	840	0.005		650	55 to +25 to +100	EE
1N4081A	130	2.5	840	0.002		260	55 to +25 to +100	EE
1N4082	140	2.5	960	0.005		700	55 to +25 to +100	EE
1N4082A	140	2.5	960	0.002		280	55 to +25 to +100	EE
1N4083	150	2.5	1020	0.005		750	55 to +25 to +100	EE
1N4083A	150	2.5	1020	0.002		300	55 to +25 to +100	EE
1N4084	175	2.5	1150	0.005		875	55 to +25 to +100	EE
1N4084A	175	2.5	1150	0.002		350	55 to +25 to +100	EE
1N4085	200	2.5	1350	0.005		1000	55 to +25 to +100	EE
1N4085A	200	2.5	1350	0.002		400	55 to +25 to +100	EE

\*JEDEC Registered Data

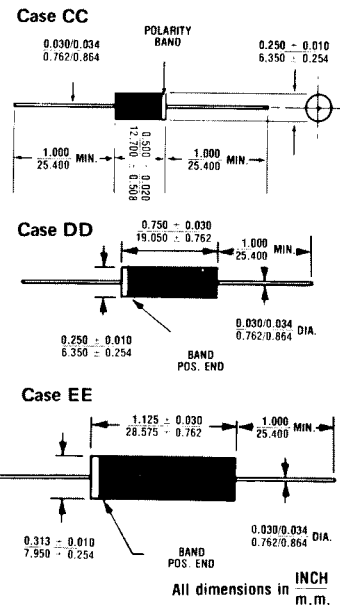


FIGURE 1

## MECHANICAL CHARACTERISTICS

FINISH: All external surfaces are corrosion resistant and leads solderable.

MOUNTING POSITION: Any.

# 1N4057 thru 1N4085A

## NOTE 1

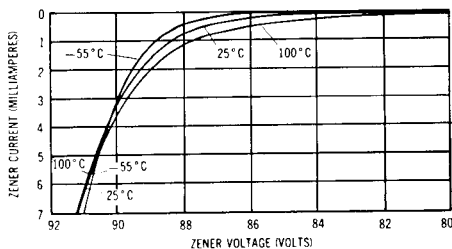
Voltage measurements to be performed 15 seconds after application of DC current.

## NOTE 2

The 1N4057 through 1N4085 series is specified over the temperature range  $-55^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  with measurements made at  $-55^{\circ}\text{C}$ ,  $+100^{\circ}\text{C}$ , and at the reference temperature  $+25^{\circ}\text{C}$ . The maximum voltage change over the range  $-55^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$  and  $+25^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  for this series is limited to the values (expressed in  $\text{mV}/^{\circ}\text{C}$ ) shown in the table on the reverse page. These values are computed by considering the temperature coefficient to be an average over the temperature range. For example, there is an  $80^{\circ}\text{C}$  change in temperature from  $-55^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$ . At an average temperature coefficient of  $0.005\%/^{\circ}\text{C}$ , the maximum percentage change in voltage would be:  $80^{\circ}\text{C} \times 0.005\%/^{\circ}\text{C}$  or  $0.4\%$ . For the 1N4057, having a nominal zener voltage of 12.4 volts, the maximum allowable voltage change would be:  $0.4\%$  of 12.4 volts or 49.6 millivolts.

## NOTE 3

Consult factory for TX, TXV or JANS equivalent SCDs.



**FIGURE 2**  
TYPICAL VOLT-AMPERE CURVE OF 1N4076A