

# 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 $I_{FZ}$ VOLTS ( $\pm 5\%$ ) (See Note 1)	ZENER TEST CURRENT (I <sub>FZ</sub> ) MA	MAXIMUM DYNAMICS IMPEDANCE (Z <sub>0</sub> ) OHMS	MAXIMUM TEMPERATURE COEFFICIENT (See Note 2) $\alpha_{Vz}$		TEMPERATURE RANGE °C	CASE TYPE NO.
				$\pm \%$ / °C	$\pm$ mV / °C		
1N4057	12.4	10.0	25	0.05	62	55 to +25 to +100	CC
1N4057A	12.4	10.0	25	0.02	25	55 to +25 to +100	CC
1N4058	14.6	10.0	30	0.05	73	55 to +25 to +100	CC
1N4058A	14.6	10.0	30	0.02	29	55 to +25 to +100	CC
1N4059	16.8	10.0	30	0.05	84	55 to +25 to +100	CC
1N4059A	16.8	10.0	30	0.02	34	55 to +25 to +100	CC
1N4060	18.5	10.0	30	0.05	92	55 to +25 to +100	CC
1N4060A	18.5	10.0	30	0.02	37	55 to +25 to +100	CC
1N4061	21	10.0	35	0.05	1.05	55 to +25 to +100	CC
1N4061A	21	10.0	35	0.02	42	55 to +25 to +100	CC
1N4062	23	10.0	40	0.05	1.15	55 to +25 to +100	CC
1N4062A	23	10.0	40	0.02	46	55 to +25 to +100	CC
1N4063	27	10.0	45	0.05	1.35	55 to +25 to +100	CC
1N4063A	27	10.0	45	0.02	54	55 to +25 to +100	CC
1N4064	30	10.0	50	0.05	1.50	55 to +25 to +100	CC
1N4064A	30	10.0	50	0.02	60	55 to +25 to +100	CC
1N4065	33	10.0	55	0.05	1.65	55 to +25 to +100	CC
1N4065A	33	10.0	55	0.02	66	55 to +25 to +100	CC
1N4066	37	7.5	80	0.05	1.85	55 to +25 to +100	CC
1N4066A	37	7.5	80	0.02	74	55 to +25 to +100	CC
1N4067	43	7.5	90	0.05	2.15	55 to +25 to +100	CC
1N4067A	43	7.5	90	0.02	86	55 to +25 to +100	CC
1N4068	47	7.5	100	0.05	2.35	55 to +25 to +100	CC
1N4068A	47	7.5	100	0.02	94	55 to +25 to +100	CC
1N4069	51	7.5	110	0.05	2.55	55 to +25 to +100	DD
1N4069A	51	7.5	110	0.02	1.02	55 to +25 to +100	DD
1N4070	56	7.5	120	0.05	2.80	55 to +25 to +100	DD
1N4070A	56	7.5	120	0.02	1.12	55 to +25 to +100	DD
1N4071	62	7.5	135	0.05	3.10	55 to +25 to +100	DD
1N4071A	62	7.5	135	0.02	1.24	55 to +25 to +100	DD
1N4072	68	5.0	240	0.05	3.40	55 to +25 to +100	DD
1N4072A	68	5.0	230	0.02	1.36	55 to +25 to +100	DD
1N4073	75	5.0	250	0.05	3.75	55 to +25 to +100	DD
1N4073A	75	5.0	253	0.02	1.50	55 to +25 to +100	DD
1N4074	82	5.0	270	0.05	4.10	55 to +25 to +100	DD
1N4074A	82	5.0	270	0.02	1.64	55 to +25 to +100	DD
1N4075	87	5.0	290	0.05	4.35	55 to +25 to +100	DD
1N4075A	87	5.0	290	0.02	1.74	55 to +25 to +100	DD
1N4076	91	5.0	310	0.05	4.55	55 to +25 to +100	DD
1N4076A	91	5.0	310	0.02	1.82	55 to +25 to +100	DD
1N4077	100	5.0	340	0.05	5.00	55 to +25 to +100	DD
1N4077A	100	5.0	340	0.02	2.00	55 to +25 to +100	DD
1N4078	105	2.5	700	0.05	5.25	55 to +25 to +100	DD
1N4078A	105	2.5	700	0.02	2.10	55 to +25 to +100	DD
1N4079	110	2.5	740	0.05	5.50	55 to +25 to +100	DD
1N4079A	110	2.5	740	0.02	2.20	55 to +25 to +100	DD
1N4080	120	2.5	800	0.05	6.00	55 to +25 to +100	DD
1N4080A	120	2.5	800	0.02	2.40	55 to +25 to +100	DD
1N4081	130	2.5	840	0.05	6.50	55 to +25 to +100	EE
1N4081A	130	2.5	840	0.02	2.60	55 to +25 to +100	EE
1N4082	140	2.5	960	0.05	7.00	55 to +25 to +100	EE
1N4082A	140	2.5	960	0.02	2.80	55 to +25 to +100	EE
1N4083	150	2.5	1020	0.05	7.50	55 to +25 to +100	EE
1N4083A	150	2.5	1020	0.02	3.00	55 to +25 to +100	EE
1N4084	175	2.5	1150	0.05	8.75	55 to +25 to +100	EE
1N4084A	175	2.5	1150	0.02	3.50	55 to +25 to +100	EE
1N4085	200	2.5	1350	0.05	10.00	55 to +25 to +100	EE
1N4085A	200	2.5	1350	0.02	4.00	55 to +25 to +100	EE

\*JEDEC Registered Data

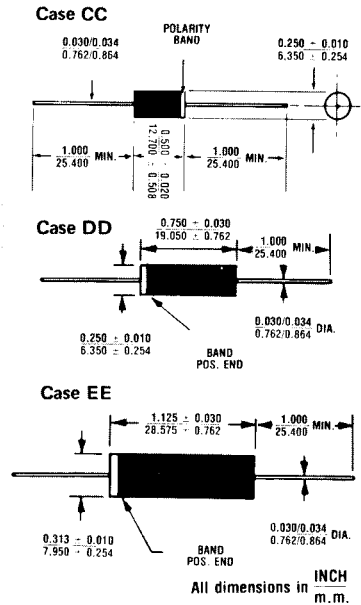


FIGURE 1

## MECHANICAL CHARACTERISTICS

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

MOUNTING POSITION: Any.

# 1N4057 thru 1N4085A

## NOTE 1

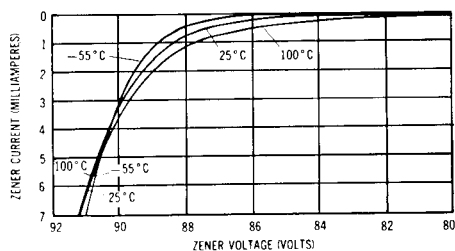
Voltage measurements to be performed 15 seconds after application of DC current.

## 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