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**1N746  
THRU  
1N759**

## Features

- Zener Voltage 3.3V to 12V
- Silicon Planar Power Zener Diodes
- Standards zener voltage tolerance is  $\pm 10\%$ , Add suffix "A" for  $\pm 5\%$  tolerance, other tolerances are available upon request

## Mechanical Data

- Case: DO-35 glass case
- Polarity: Color band denotes cathode end
- Weight: Approx. 0.13 gram

## Maximum Ratings

	Symbol	Value	Units
Zener Current		See Table 1	
Power Dissipation @ $T_A=50^\circ\text{C}$	$P_{\text{tot}}$	500	mW
Junction Temperature	$T_J$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{STG}}$	-65 to 175	$^\circ\text{C}$

## Electrical Characteristics @ 25 $^\circ\text{C}$ Unless Otherwise Specified

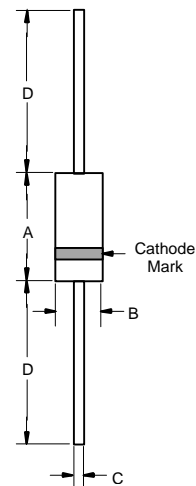
	Symbol	Maximum	Unit
Thermal resistance	$R_{\theta\text{JA}}$	300	$^\circ\text{C/W}$
Forward Voltage @ $I_F=200\text{mA}$	$V_F$	1.5	V

### NOTE:

- 1) Valid provided that a distance of 8mm from case are kept at ambient temperature
- 2) Power derating: 4.0mW/ $^\circ\text{C}$  above 50 $^\circ\text{C}$

## 0.5W Silicon Planar Zener Diodes

### DO-35



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

# 1N746 thru 1N759



MCC PART NUMBER	NORMAL ZENER VOLTAGE $V_z @ I_{zt}$	TEST CURRENT $I_{zt}$	MAXIMUM ZENER IMPEDANCE $Z_{zt} @ I_{zt}$	MAXIMUM REVERSE LEAKAGE CURRENT $I_r @ V_r=1V$		MAXIMUM ZENER CURRENT $I_{zm}$	TYPICAL TEMP. COEFFICIENT
	VOLTS	mA	OHMS	$\mu A @ 25^\circ C$	$\mu A @ 125^\circ C$	mA	%/°C
1N746	3.3	20	28	10	30	110	-.066
1N747	3.6	20	24	10	30	100	-.058
1N748	3.9	20	23	10	30	95	-.046
1N749	4.3	20	22	2	30	85	-.033
1N750	4.7	20	19	2	30	75	-.015
1N751	5.1	20	17	1	20	70	$\pm 0.10$
1N752	5.6	20	11	1	20	65	+0.030
1N753	6.2	20	7.0	0.1	20	60	+0.049
1N754	6.8	20	5.0	0.1	20	55	+0.053
1N755	7.5	20	6.0	0.1	20	50	+0.057
1N756	8.2	20	8.0	0.1	20	45	+0.060
1N757	9.1	20	10	0.1	20	40	+0.061
1N758	10	20	17	0.1	20	35	+0.062
1N759	12	20	30	0.1	20	30	+0.062

Note:

- 1) Tested with pulses  $t_p = 20ms$
- 2) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case.
- 3) Zener impedance derived by superimposing on  $I_{zT}$ , a 60 cps, rms ac current equal to 10%  $I_{zT}$  (2 mA ac)
- 4) Allowance has been made for the increase in  $V_z$  due to  $Z_z$  and for the increase in junction temperature as the unit approaches thermal equilibrium at the power dissipation of 400mW.