

# DIGITRON SEMICONDUCTORS

**1N746 – 1N759A  
1N4370-1N4372A**

**SILICON PLANAR POWER ZENER DIODES**

## MAXIMUM RATINGS

<b>Operating and Storage Temperature</b>	-65 to +175°C
<b>Thermal Resistance</b>	250°C/W junction to lead at 3/8" lead length from body
<b>Steady State Power</b>	0.5 Watts at $T_L \leq 50^\circ\text{C}$
<b>Forward Voltage @ 200mA</b>	1.1 Volts
<b>Solder Temperatures:</b>	260°C for 10 s (max)

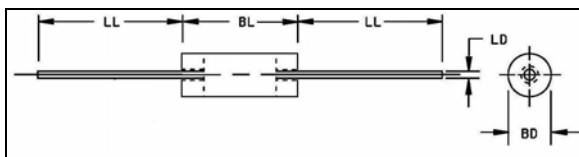
## ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise specified

Part Number (Note 1)	Normal Zener Voltage $V_Z @ I_{ZT}$ (Note 2)	Zener Test Current $I_{ZT}$	Maximum Zener Impedance $Z_{ZT} @ I_{ZT}$ (Note 3)	Maximum Reverse Leakage Current $V_R = 1 \text{ Volt}$		Maximum Zener Current $I_{ZM}$ (Note 4)	Typical Temperature Coefficient Of Zener Voltage
	VOLTS	mA	OHMS	$\mu\text{A} @ 25^\circ\text{C}$	$\mu\text{A} @ 125^\circ\text{C}$	mA	%/°C
<b>1N4370</b>	2.4	20	30	100	200	150	-.085
<b>1N4371</b>	2.7	20	30	75	150	135	-.080
<b>1N4372</b>	3.0	20	29	50	100	120	-.075
<b>1N746</b>	3.3	20	28	10	30	110	-.066
<b>1N747</b>	3.6	20	24	10	30	100	-.058
<b>1N748</b>	3.9	20	23	10	30	95	-.046
<b>1N749</b>	4.3	20	22	2	30	85	-.033
<b>1N750</b>	4.7	20	19	2	30	75	-.015
<b>1N751</b>	5.1	20	17	1	20	70	±.010
<b>1N752</b>	5.6	20	11	1	20	65	+.030
<b>1N753</b>	6.2	20	7	0.1	20	60	+.049
<b>1N754</b>	6.8	20	5	0.1	20	55	+.053
<b>1N755</b>	7.5	20	6	0.1	20	50	+.057
<b>1N756</b>	8.2	20	8	0.1	20	45	+.060
<b>1N757</b>	9.1	20	10	0.1	20	40	+.061
<b>1N758</b>	10	20	17	0.1	20	35	+.062
<b>1N759</b>	12	20	30	0.1	20	30	+.062

- Notes:
1. Suffix letter A denotes  $\pm 5\%$  tolerance, suffix C denotes  $\pm 2\%$  tolerance, & suffix D denotes  $\pm 1\%$  tolerance.
  2. Voltage measurements to be performed 20 seconds after application of dc current.
  3. Zener impedance derived by superimposing on  $I_{ZT}$ , a 60cps, rms ac current equal to 10%  $I_{ZT}$  (2mA 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.

## MECHANICAL CHARACTERISTICS

<b>Case:</b>	DO-35 Glass
<b>Marking:</b>	Alpha Numeric
<b>Polarity:</b>	Cathode Band

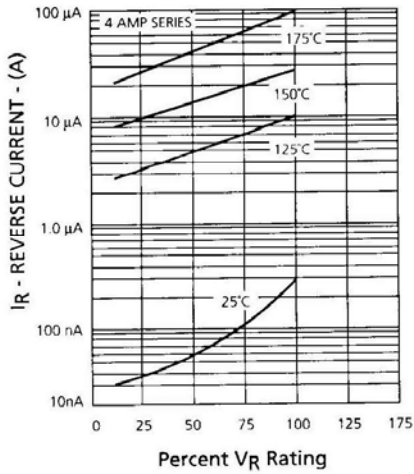


	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>BD</b>	0.055	0.090	1.400	2.290
<b>BL</b>	0.120	0.200	3.050	5.080
<b>LD</b>	0.018	0.022	0.460	0.559
<b>LL</b>	1.000	1.500	25.400	38.100

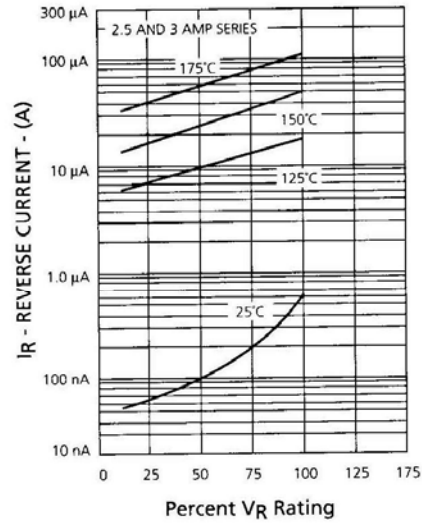
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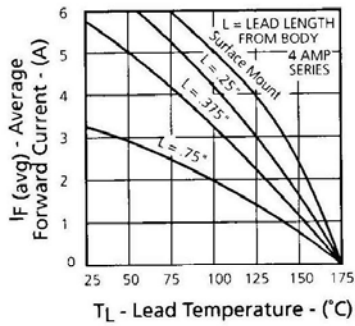
SILICON PLANAR POWER ZENER DIODES



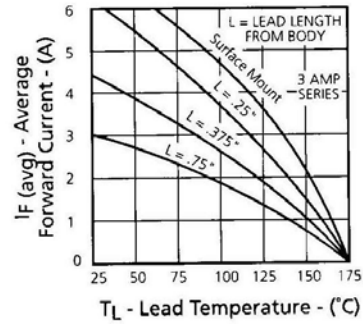
Typical Reverse Current vs Applied Reverse Voltage



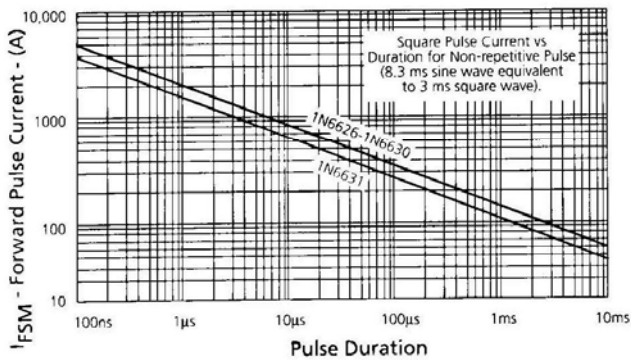
Typical Reverse Current vs Applied Reverse Voltage



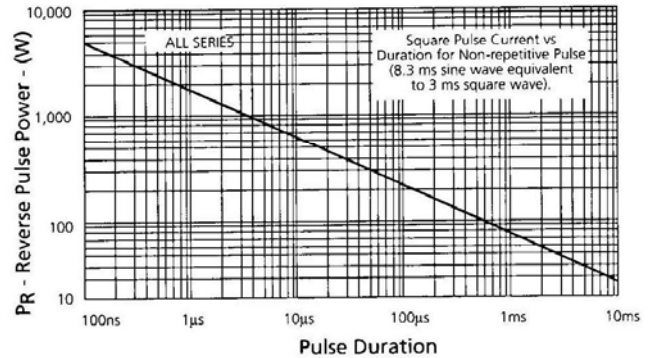
Average Forward Current vs Lead Temperature (50% Duty Cycle, Square Wave)



Average Forward Current vs Lead Temperature (50% Duty Cycle, Square Wave)



Forward Pulse Current vs Pulse Duration

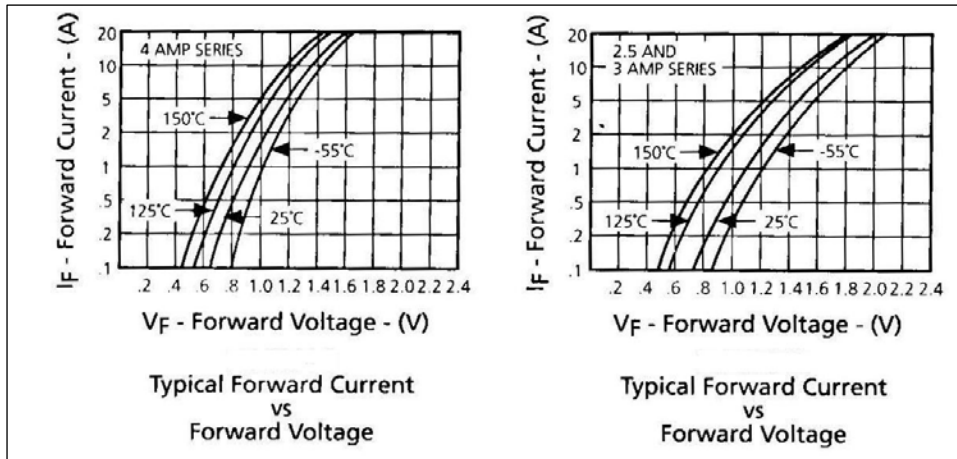


Reverse Pulse Power vs Pulse Duration

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Available Non-RoHS (standard) or RoHS compliant (add PBF suffix)  
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number