



# 1N957 THRU 1N978

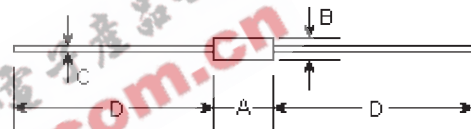
## SILICON PLANAR ZENER DIODES

### Features

#### Silicon Planar Zener Diodes

Standard Zener voltage tolerance is  $\pm 20\%$ . Add suffix "A" for  $\pm 10\%$  tolerance and suffix "B" for  $\pm 5\%$  tolerance. Other tolerances, non standard and higher Zener voltages upon request.

#### DO-35



DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	-	0.154	-	3.9	
B	-	0.075	-	1.9	$\phi$
C	-	0.020	-	0.52	$\phi$
D	1.083	-	27.50	-	

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

	Symbols	Values	Units
Zener current see Table "Characteristics"			
Power dissipation at $T_{amb}=50^\circ\text{C}$	$P_{tot}$	400 <sup>(1)</sup>	mW
Junction temperature	$T_j$	175	$^\circ\text{C}$
Storage temperature range	$T_s$	-65 to +175	$^\circ\text{C}$

Note:

(1) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

### Characteristics at $T_{amb}=25^\circ\text{C}$

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient Air	$R_{thA}$	-	-	0.3 <sup>(1)</sup>	K/mW
Forward voltage at $I_F=200\text{mA}$	$V_F$	-	-	1.5	V

Note:

(1) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

Type	Zener voltage range <sup>1)</sup>		Dynamic resistance			Typical temperature coefficient (%/°C)	Maximum reverse leakage current			Maximum regulator current I <sub>ZM</sub>
	V <sub>Znom</sub>	I <sub>ZT</sub>	r <sub>ZT</sub> and r <sub>ZK</sub> at I <sub>ZK</sub>				I <sub>R</sub> <sup>2)</sup>	Test - Voltage Suffix A      Suffix B		
	V	mA	Ω	Ω	mA		uA	V	V	
1N957	6.8	18.5	4.5	700	1.0	0.050	150	4.9	5.2	47
1N958	7.5	16.5	5.5	700	0.5	0.058	75	5.4	5.7	42
1N959	8.2	15	6.5	700	0.5	0.062	50	5.9	6.2	38
1N960	9.1	14	7.5	700	0.5	0.068	25	6.6	6.9	35
1N961	10	12.5	8.5	700	0.25	0.075	10	7.2	7.6	32
1N962	11	11.5	9.5	700	0.25	0.076	5	8.0	8.4	28
1N963	12	10.5	11.5	700	0.25	0.077	5	8.6	9.1	26
1N964	13	9.5	13	700	0.25	0.079	5	9.4	9.9	24
1N965	15	8.5	16	700	0.25	0.082	5	10.8	11.4	21
1N966	16	7.8	17	700	0.25	0.083	5	11.5	12.2	19
1N967	18	7.0	21	750	0.25	0.085	5	13.0	13.7	17
1N968	20	6.2	25	750	0.25	0.086	5	14.4	15.2	15
1N969	22	5.6	29	750	0.25	0.087	5	15.8	16.7	14
1N970	24	5.2	33	750	0.25	0.088	5	17.3	18.2	13
1N971	27	4.6	41	750	0.25	0.090	5	19.4	20.6	11
1N972	30	4.2	49	1000	0.25	0.091	5	21.6	22.8	10
1N973	33	3.8	58	1000	0.25	0.092	5	23.8	25.1	9.0
1N974	36	3.4	70	1000	0.25	0.093	5	25.9	27.4	8.5
1N975	39	3.2	80	1000	0.25	0.094	5	28.1	29.7	7.8
1N976	43	3.0	93	1500	0.25	0.095	5	31.0	32.7	7.0
1N977	47	2.7	105	1500	0.25	0.095	5	33.8	35.8	6.4
1N978	51	2.5	125	1500	0.25	0.096	5	36.7	38.8	5.9

Notes:

(1) Test with pulse tp=20ms.

(2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

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## RATINGS AND CHARACTERISTIC CURVES

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### Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient  
temperature at a distance of 10 mm from case.

