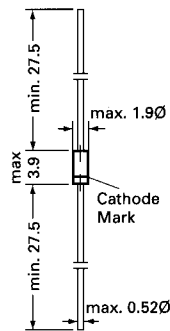


1N 957 ... 1N 978 SILICON PLANAR ZENER DIODES

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 tolerance, non standard and higher Zener voltages upon request.



Glass case JEDEC DO-35

Dimensions in mm

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

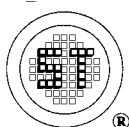
| | Symbol | Value | Unit |
|---|-----------|-------------------|------------------|
| Zener Current see Table " Characteristics " | | | |
| Power Dissipation at $T_{amb} = 50\text{ }^\circ\text{C}$ | P_{tot} | 400 ¹⁾ | mW |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -65 to + 175 | $^\circ\text{C}$ |

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

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

| | Symbol | Min. | Typ | Max | Unit |
|---|-----------|------|-----|-------------------|------|
| Thermal Resistance Junction to Ambient Air | R_{thA} | - | - | 0.3 ¹⁾ | K/mW |
| Forward Voltage at $I_F = 200\text{ mA}$ | V_F | - | - | 1.5 | V |

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



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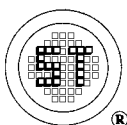
1N 957 ... 1N 978

SILICON PLANAR ZENER DIODES

| Type | Zener Voltage range ¹⁾ | | Dynamic resistance | | | Typical Temperature coefficient (% / °C) | Maximum Reverse Leakage Current | | | Maximum Regulator Current I_{ZM} |
|-------|-----------------------------------|----------|--------------------|----------------------|------|---|---------------------------------|----------------|---------------|---------------------------------------|
| | V_{znom} | I_{ZT} | r_{zT} | r_{zk} at I_{zk} | | | I_R ²⁾ | Test - Voltage | | |
| | V | mA | Ω | Ω | mA | | μA | Suffix A V | Suffix B 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 | 0.095 | 5 | 36.7 | 38.8 | 5.9 |

¹⁾ Tested with pulses $t_p = 20$ ms.

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

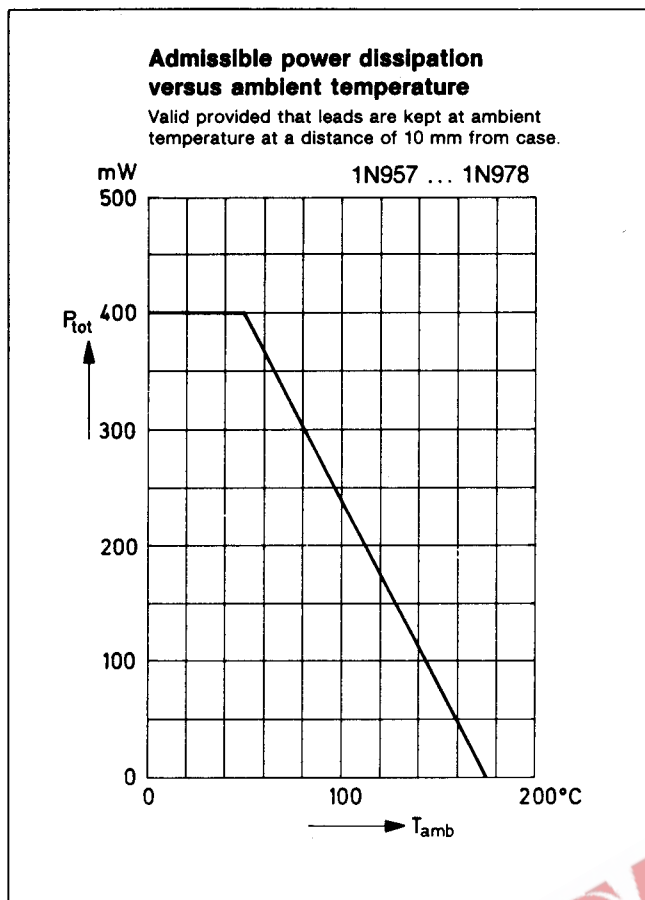


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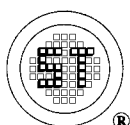
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