**FEATURES**
- Low zener noise specified
- Low zener impedance
- Low leakage current
- Hermetically sealed glass package

**MECHANICAL CHARACTERISTICS**
- CASE: Hermetically sealed glass case. DO-35.
- LEAD MATERIAL: Tinned copper clad steel.
- MARKING: Body painted, alphanumeric.
- POLARITY: Banded end is cathode.
- THERMAL RESISTANCE: 200°C/W (Typical) junction to lead at 0.375 – inches from body. Metallurgically bonded DO – 35’s exhibit less than 100°C/Watt at zero distance from body.

**MAXIMUM RATINGS**
Operating temperature: –65°C to 200°C; Storage temperature: –65°C to +200°C

**ELECTRICAL CHARACTERISTICS**
(T<sub>a</sub> = 25°C unless otherwise noted. Based on dc measurements at thermal equilibrium V<sub>Z</sub> = 1.11 MAX @ I<sub>2T</sub> = 200 mA for all types)

<table>
<thead>
<tr>
<th>JEDEC TYPE NO.</th>
<th>NOMINAL ZENER VOLTAGE</th>
<th>V&lt;sub&gt;2T&lt;/sub&gt; &amp; I&lt;sub&gt;2T&lt;/sub&gt; VOLTS (Note 2)</th>
<th>I&lt;sub&gt;Z&lt;/sub&gt;, mADC</th>
<th>I&lt;sub&gt;R&lt;/sub&gt;, µADC (Note 4)</th>
<th>MAX REVERSE LEAKAGE CURRENT</th>
<th>B-C-D SUFFIX</th>
<th>MAXIMUM DC ZENER CURRENT</th>
<th>B-C-D SUFFIX</th>
<th>MAXIMUM SUSTAINED CURRENT</th>
<th>B-C-D SUPPLY RATING</th>
<th>REGULATION FACTOR</th>
<th>V&lt;sub&gt;Z&lt;/sub&gt; VOLTS</th>
<th>V&lt;sub&gt;2&lt;/sub&gt; CURRENT</th>
<th>V&lt;sub&gt;2&lt;/sub&gt; VOLTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N5518</td>
<td>3.3</td>
<td>20</td>
<td>26</td>
<td>5.0</td>
<td>0.90</td>
<td>1.0</td>
<td>3.0</td>
<td>1.0</td>
<td>1.5</td>
<td>68</td>
<td>0.5</td>
<td>0.90</td>
<td>2.0</td>
<td>2.0</td>
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<tr>
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<td>24</td>
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<td>22</td>
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<td>0.90</td>
<td>1.0</td>
<td>3.0</td>
<td>1.0</td>
<td>1.5</td>
<td>61</td>
<td>0.5</td>
<td>0.90</td>
<td>2.0</td>
<td>2.0</td>
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<tr>
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<tr>
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<td>1.0</td>
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<td>51</td>
<td>0.5</td>
<td>0.60</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**NOTE 1 - TOLERANCE AND VOLTAGE DESIGNATION**
The JEDEC type numbers shown are ±20% with guaranteed limits for only V<sub>2</sub>, I<sub>2</sub>, and V<sub>Z</sub>. Units with A suffix are ±10% with guaranteed limits for only V<sub>2</sub>, I<sub>2</sub>, and V<sub>Z</sub>. Units with guaranteed limits for all six parameters are indicated by a B suffix for ±5.0% units, C suffix for ±2.0% and D suffix for ±1.0%.

**NOTE 2 - ZENER (V<sub>Z</sub>) VOLTAGE MEASUREMENT**
Nominal zener voltage is measured with the device junction in thermal equilibrium with ambient temperature of 25°C.

**NOTE 3 - ZENER IMPEDANCE (Z<sub>Z</sub>) DERIVATION**
The zener impedance is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I<sub>2T</sub>) is superimposed on I<sub>2T</sub>.

**NOTE 4 - REVERSE LEAKAGE CURRENT (I<sub>R</sub>)**
Reverse leakage currents are guaranteed and are measured at V<sub>R</sub> as shown on the table.

**NOTE 5 - MAXIMUM REGULATOR CURRENT (I<sub>2M</sub>)**
The maximum current shown is based on the maximum voltage of a 5.0% type unit, therefore, it applies only to the B suffix device. The actual I<sub>2M</sub> for any device may not exceed the value of 400 milliwatts divided by the actual V<sub>2</sub> of the device.

**NOTE 6 - MAXIMUM REGULATION FACTOR (∆V<sub>Z</sub>)**
∆V<sub>Z</sub> is the maximum difference between V<sub>Z</sub> at I<sub>2T</sub> and V<sub>Z</sub> at I<sub>2</sub> measured with the device junction in thermal equilibrium.
RATINGS AND CHARACTERISTIC CURVES (1N5518 THRU 1N5546)

FIGURE 1 - POWER TEMPERATURE DERATING CURVE

FIGURE 2 - ZENER DIODE CHARACTERISTICS AND SYMBOL IDENTIFICATION

FIGURE 3 - CAPACITANCE VS. VZ CURVE