## Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

## Mechanical Data

- **Case**: Molded plastic DO-204AC (DO-15)
- **Epoxy**: UL 94V-O rate flame retardant
- **Lead**: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- **Polarity**: Color band denotes cathode end
- **High temperature soldering guaranteed**: 250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- **Mounting position**: Any
- **Weight**: 0.014 ounce, 0.395 gram

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbols</th>
<th>SF21</th>
<th>SF22</th>
<th>SF23</th>
<th>SF24</th>
<th>SF25</th>
<th>SF26</th>
<th>SF27</th>
<th>SF28</th>
<th>SF29</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum repetitive peak reverse voltage</td>
<td>$V_{RPM}$</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum RMS voltage</td>
<td>$V_{RMS}$</td>
<td>35</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>210</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>$V_{DC}$</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum average forward rectified current .375&quot; (9.5mm) lead length @ $T_e=55^\circ$C</td>
<td>$I_{AVG}$</td>
<td>2.0</td>
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<td></td>
<td>Amps</td>
</tr>
<tr>
<td>Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)</td>
<td>$I_{PM}$</td>
<td>50.0</td>
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<td></td>
<td>Amps</td>
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<tr>
<td>Maximum instantaneous forward voltage @ 2.0A</td>
<td>$V_{f}$</td>
<td>0.95</td>
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<td>1.3</td>
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<td>1.7</td>
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<td></td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum DC reverse current @ $T_e=25^\circ$C</td>
<td>$I_{R}$</td>
<td>5.0</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>uA</td>
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<tr>
<td>at rated DC blocking voltage @ $T_e=125^\circ$C</td>
<td>$I_{R}$</td>
<td>100</td>
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<td></td>
<td></td>
<td></td>
<td>uA</td>
</tr>
<tr>
<td>Maximum reverse recovery time (Note 1)</td>
<td>$t_{rr}$</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ns</td>
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<tr>
<td>Typical junction capacitance (Note 2)</td>
<td>$C_j$</td>
<td>60</td>
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<td></td>
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<td></td>
<td>pF</td>
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<td>Operating junction temperature range</td>
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<td></td>
<td>°C</td>
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<td>Storage temperature range</td>
<td>$T_{STG}$</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
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</tbody>
</table>

**Notes:**
1. Reverse Recovery Test Conditions: $I_{F}=0.5\text{A}$, $I_{R}=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
RATINGS AND CHARACTERISTIC CURVES

**FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**

NOTES:
1. Rise Time-7ns max. Input Impedance-
   1 megohm 2pf
2. Rise Time: 10ns max. Source Impedance-
   50 ohms

**FIG. 2- MAXIMUM AVERAGE FORWARD CURRENT DERATING**

AMBIENT TEMPERATURE (°C)

**FIG. 3- TYPICAL REVERSE CHARACTERISTICS**

**FIG. 4- TYPICAL FORWARD CHARACTERISTICS**

**FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

**FIG. 6- TYPICAL JUNCTION CAPACITANCE**