N-Channel RF Amplifiers

- This device is designed for VHF/UHF amplifiers.
- Sourced from process 50.

**Absolute Maximum Ratings** $T_a=25^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{DG}$</td>
<td>Drain-Gate Voltage</td>
<td>30</td>
<td>V</td>
</tr>
<tr>
<td>$V_{GS}$</td>
<td>Gate-Source Voltage</td>
<td>-30</td>
<td>V</td>
</tr>
<tr>
<td>$I_{GF}$</td>
<td>Forward Gate Current</td>
<td>10</td>
<td>mA</td>
</tr>
<tr>
<td>$P_D$</td>
<td>Total Device Dissipation @$T_a=25^\circ C$ Derate above 25$^\circ C$</td>
<td>350</td>
<td>mW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.8</td>
<td>mW/$^\circ C$</td>
</tr>
<tr>
<td>$T_{STG}$</td>
<td>Operating and storage Temperature Range</td>
<td>-55 - 150</td>
<td>$^\circ C$</td>
</tr>
</tbody>
</table>

**Electrical Characteristics** $T_a=25^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Condition</th>
<th>Min.</th>
<th>Max.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V(BR)_{GSS}$</td>
<td>Gate-Source Breakdown Voltage</td>
<td>$V_{DS} = 0, I_G = 1\mu A$</td>
<td>-30</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>$V_{GS}$</td>
<td>Gate-Source</td>
<td>$V_{DS} = 15V, I_D = 200\mu A$</td>
<td>-0.5</td>
<td>-7.5</td>
<td>V</td>
</tr>
<tr>
<td>$V_{GS(off)}$</td>
<td>Gate-Source Cutoff Voltage</td>
<td>$V_{DS} = 15V, I_D = 10nA$</td>
<td>-0.5</td>
<td>-8</td>
<td>V</td>
</tr>
<tr>
<td>$I_{GSS}$</td>
<td>Gate Reverse Current</td>
<td>$V_{GS} = -20V, V_{GS} = 0$</td>
<td>-5</td>
<td></td>
<td>nA</td>
</tr>
</tbody>
</table>

**On Characteristics**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Condition</th>
<th>Min.</th>
<th>Max.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$I_{DSS}$</td>
<td>Zero-Gate Voltage Drain Current</td>
<td>BF256A</td>
<td>$V_{GS} = 15V, V_{GS} = 0$</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BF256B</td>
<td></td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BF256C</td>
<td></td>
<td>11</td>
<td>18</td>
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</table>

**Small Signal Characteristics**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Test Condition</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$gfs$</td>
<td>Common Source Forward Transconductance</td>
<td>$V_{DS} = 15V, V_{GS} = 0, f = 1KHz$</td>
<td>4.5</td>
<td>mmhos</td>
</tr>
</tbody>
</table>
Package Dimensions

TO-92

Dimensions in Millimeters
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PRODUCT STATUS DEFINITIONS

Definition of Terms

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<thead>
<tr>
<th>Datasheet Identification</th>
<th>Product Status</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance Information</td>
<td>Formative or In Design</td>
<td>This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.</td>
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<tr>
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<td>First Production</td>
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