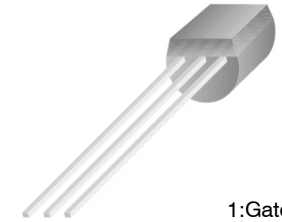
# N-Channel JFET RF Amplifier

# BF256B




1:Gate
2:Source
3:Drain

**TO-92-3**
**CASE 135AN**

### Features

- This Device is Designed for VHF / UHF Amplifiers
- Sourced from Process 50
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

### ABSOLUTE MAXIMUM RATINGS

Values are at $T_A$ = 25 °C unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{DG}$ | Drain-Gate Voltage | 30 | V |
| $V_{GS}$ | Gate-Source Voltage | –30 | V |
| $I_{GF}$ | Forward Gate Current | 10 | mA |
| $T_J$, $T_{STG}$ | Operating and Storage Temperature Range | –55 to 150 | °C |

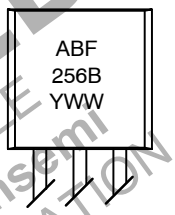
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### THERMAL CHARACTERISTICS

Values are at $T_A$ = 25 °C unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $P_D$ | Total Device Dissipation at $T_A$ = 25 °C | 350 | mW |
| | Derate Above 25 °C | 2.8 | mW/°C |

### MARKING DIAGRAM




A = Assembly Site
BF256B = Specific Device Code
Y = Year of Production
WW = Work Week Number

### ORDERING INFORMATION

| Device | Package | Shipping |
|---|---|---|
| BF256B | TO-92-3 | 10,000 Bulk/Bag |

DISCONTINUED
THIS DEVICE IS NOT AVAILABLE
PLEASE CONTACT YOUR onsemi
REPRESENTATIVE FOR INFORMATION

### ELECTRICAL CHARACTERISTICS

Values are at $T_A$ = 25°C unless otherwise noted.

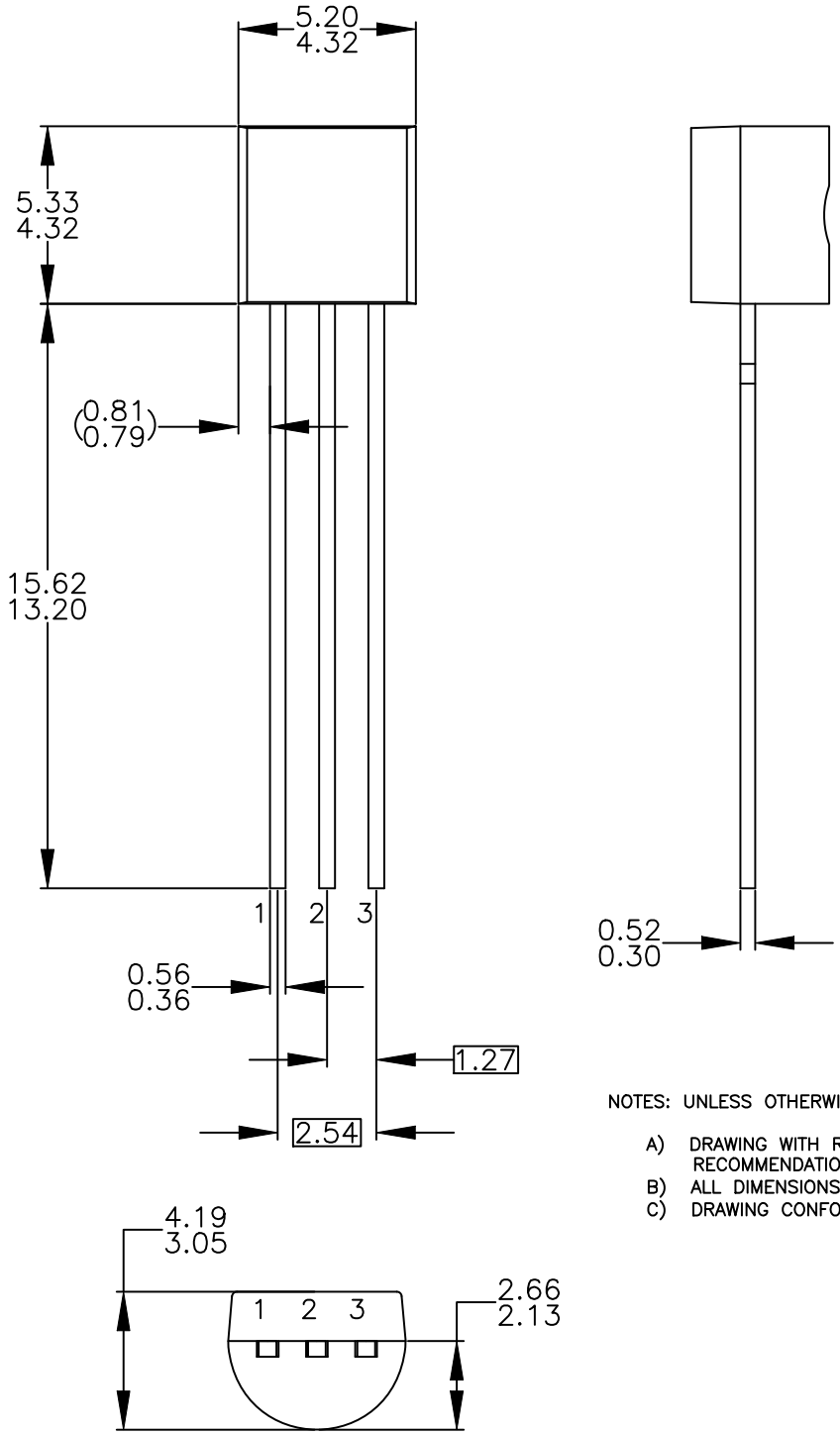
| Symbol | Parameter | Conditions | Min | Max | Unit |
|---|---|---|---|---|---|
| $V_{(BR)GSS}$ | Gate-Source Breakdown Voltage | $V_{DS}$ = 0, $I_G$ = 1 μA | –30 | – | V |
| $V_{GS}$ | Gate-Source Voltage | $V_{DS}$ = 15 V, $I_D$ = 200 μA | –0.5 | –7.5 | V |
| $V_{GS}$(off) | Gate-Source Cut-Off Voltage | $V_{DS}$ = 15 V, $I_D$ = 10 nA | –0.5 | –8.0 | V |
| $I_{GSS}$ | Gate Reverse Current | $V_{GS}$ = –20 V, $V_{DS}$ = 0 | – | –5 | nA |
| $I_{DSS}$ | Zero-Gate Voltage Drain Current | $V_{DS}$ = 15 V, $V_{GS}$ = 0 | 6 | 13 | mA |
| gfs | Common Source Forward Transconductance | $V_{DS}$ = 15 V, $V_{GS}$ = 0,f = 1 kHz | 4.5 | – | mmhos |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

© Semiconductor Components Industries, LLC, 2003

**TO−92 3 4.825x4.76**
CASE 135AN
ISSUE O

DATE 31 JUL 2016




NOTES: UNLESS OTHERWISE SPECIFIED

A) DRAWING WITH REFERENCE TO JEDEC TO−92 RECOMMENDATIONS.
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) DRAWING CONFORMS TO ASME Y14.5M−2009.

| | | |
|---|---|---|
| **DOCUMENT NUMBER:** | **98AON13880G** | Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |
| **DESCRIPTION:** | **TO−92 3 4.825X4.76** | **PAGE 1 OF 1** |

**onsemi** and onsemi are trademarks of Semiconductor Components Industries, LLC dba **onsemi** or its subsidiaries in the United States and/or other countries. **onsemi** reserves the right to make changes without further notice to any products herein. **onsemi** makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. **onsemi** does not convey any license under its patent rights nor the rights of others.

**onsemi**, onsemi, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent−Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as−is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi** products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by **onsemi**. "Typical" parameters which may be provided in **onsemi** data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. **onsemi** does not convey any license under any of its intellectual property rights nor the rights of others. **onsemi** products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use **onsemi** products for any such unintended or unauthorized application, Buyer shall indemnify and hold **onsemi** and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that **onsemi** was negligent regarding the design or manufacture of the part. **onsemi** is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

## ADDITIONAL INFORMATION

**TECHNICAL PUBLICATIONS**:
**Technical Library:** www.onsemi.com/design/resources/technical−documentation
**onsemi Website:** www.onsemi.com

**ONLINE SUPPORT**: www.onsemi.com/support
**For additional information, please contact your local Sales Representative at**
www.onsemi.com/support/sales