

# N-Channel JFET RF Amplifier

## BF256B

### 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  $T_A = 25^\circ\text{C}$  unless otherwise noted.

| Symbol         | Parameter                               | Value      | Unit             |
|----------------|-----------------------------------------|------------|------------------|
| $V_{DG}$       | Drain-Source 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 | $^\circ\text{C}$ |

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  $T_A = 25^\circ\text{C}$  unless otherwise noted.

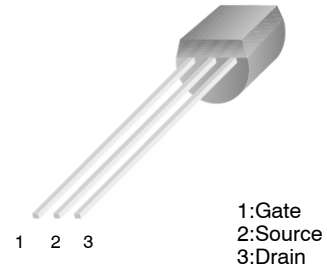
| Symbol | Parameter                                            | Value | Unit                 |
|--------|------------------------------------------------------|-------|----------------------|
| $P_D$  | Total Device Dissipation at $T_A = 25^\circ\text{C}$ | 350   | mW                   |
|        | Derate Above $25^\circ\text{C}$                      | 2.8   | mW/ $^\circ\text{C}$ |

### ELECTRICAL CHARACTERISTICS

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

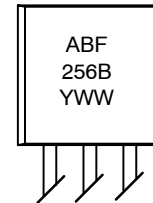
| Symbol        | Parameter                              | Conditions                                             | Min  | Max  | Unit  |
|---------------|----------------------------------------|--------------------------------------------------------|------|------|-------|
| $V_{(BR)GSS}$ | Gate-Source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



TO-92-3  
CASE 135AN

### 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 |

# MECHANICAL CASE OUTLINE

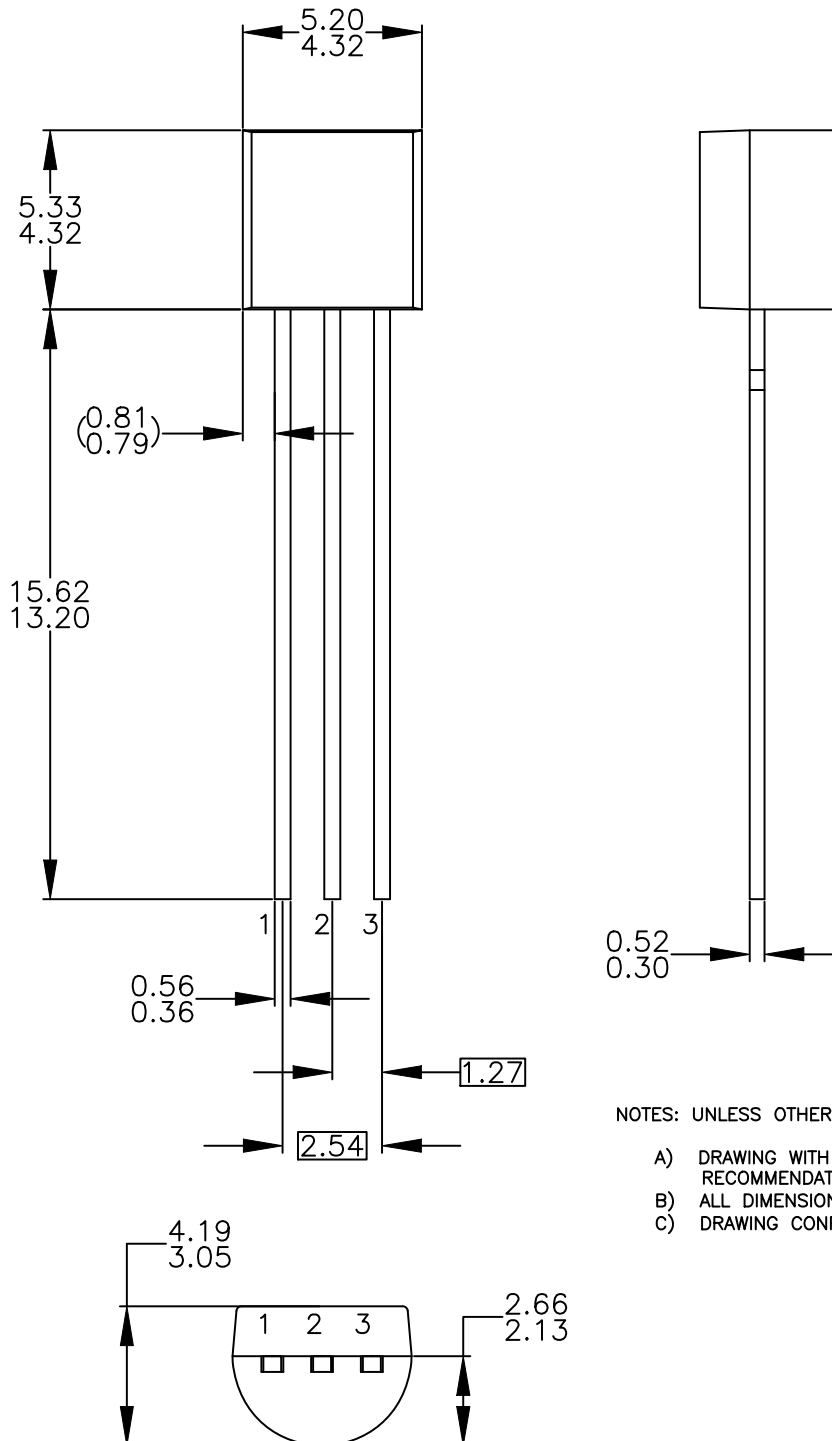
## PACKAGE DIMENSIONS

ON Semiconductor®

ON

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.

|                  |                    |                                                                                                                                                                                     |
|------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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| DESCRIPTION:     | TO-92 3 4.825X4.76 | PAGE 1 OF 1                                                                                                                                                                         |

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