



## New Product Announcement

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### ZABG4002

# ZABG4002 – Advanced low power four stage GaAs FET bias IC for LNB and LNA applications

The ZABG4002 is a four stage depletion mode FET bias controller intended primarily for satellite Low Noise Block's (LNB's). It is also suitable for other Low Noise Amplifier (LNA) applications such as those in found in PMR's and microwave links.

The ZABG4002 provides each FET with an independent protected negative gate voltage and positive drain voltage with user programmable drain current.

The ZABG4002 helps minimise power consumption, component cost and PCB area whilst enhancing overall reliability



### The Diodes advantage

The small and flexible solution allows LNB designs to use smaller packaging whilst taking advantage its higher performance and low current operation.

#### ■ GaAs FET LNA bias

- Provides up to four independent bias stages for GaAs and HEMT FET LNA's
- Dynamic FET protection and temperature compensation
- User programmable drain current of 0-15mA

#### ■ Low current operation and wide supply voltage range

- Operates from 3.3V to 8V rails allowing for any LNB architecture
- Designed for 3.3V low power LNB's using DC-DC converters
- Allows pairs of FET's to be switched off for intelligent LNB systems

#### ■ Small and flexible solution

- Minimal applications circuit whilst allowing flexibility
- Packaged in the small 3x3mm QFN package for minimal PCB space

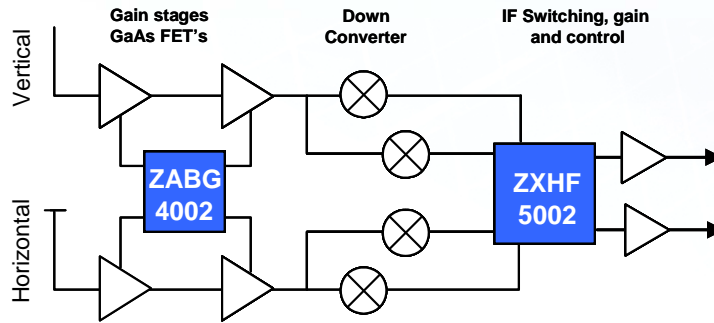
### Application Areas

- Twin LNB's
- Quad LNB's
- US market LNB's
- PMR
- Microwave links
- General high frequency communications



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## Low power Twin Universal LNB system diagram



## Key Parameters

| Part Number    | Bias Stages |            |            |                        |                          | Power and Protection |          |                |
|----------------|-------------|------------|------------|------------------------|--------------------------|----------------------|----------|----------------|
|                | LNA Fixed   | Mixer Bias | FET Off    | LNA Drain Current (mA) | Mixer Drain Current (mA) | Vcc (V)              | Icc (mA) | FET Protection |
| ZABG4002JA16TC | 4           | 0          | -2.5V Gate | 0 to 15                | NA                       | 3.3V to 8V           | 1.5      | Yes            |

To find out more information:

Datasheet: [www.diodes.com/datasheets/ZABG4002.pdf](http://www.diodes.com/datasheets/ZABG4002.pdf)

Product page: [www.diodes.com/products/catalog/detail.php?item-id=5549&popup=datasheet](http://www.diodes.com/products/catalog/detail.php?item-id=5549&popup=datasheet)

DBS page: [www.diodes.com/DBS](http://www.diodes.com/DBS)

## Ordering information

| Device         | Packaging | Reel size | Tape width | Quantity |
|----------------|-----------|-----------|------------|----------|
| ZABG4002JA16TC | QFN1633   | 13" 330mm | 8mm        | 3000     |