



New Product Announcement

ZABG6002

Programmable 6 stage FET LNA and active mixer bias controller

The ZABG6002 is a low power, programmable depletion mode FET bias and mixer controller intended primarily for satellite Low Noise Blocks (LNBs). Designed to provide system flexibility the ZABG6002 can be programmed to bias six low noise amplifier (LNA) stages or four LNA and two active mixer stages, allowing the ZABG6002 to be used in several system designs.

Combining advanced IC process and packaging techniques, the ZABG6002 operates with minimal current over a wide supply voltage. The small package and reduced component count minimises the PCB area whilst enhancing overall LNB reliability.



The Diodes advantage

A flexible solution allowing LNB designers to use one device for several system designs whilst taking advantage its advanced FET protection, higher performance and low current operation.

- **Programmable GaAs FET LNA and active mixer bias**
 - Provides either up to six independent bias stages for GaAs and HEMT FET LNAs or up to four LNA and two active mixer stages.
 - Independent user programmable drain current for the LNAs and active mixers.
- **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 system flexibility
 - Packaged in the small 4x4mm QFN package for minimal PCB space and the standard QSOP20

Application Areas

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



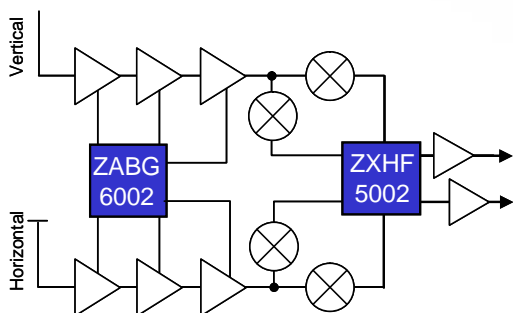
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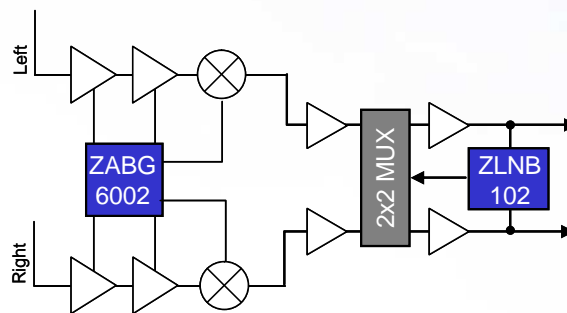
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System examples

Standard Twin LNB



US Dual LNB



Key Parameters

Part Number	Bias Stages						Power and Protection				Package Outlines
	LNA Fixed (Qty.)	Active Mixer (Qty.)	LNA Vdrain (V)	LNA Idrain (mA)	Mixer Vdrain (V)	Mixer Idrain (mA)	VCC (V)	Iq (mA)	Vneg (V)	FET Protection	
ZABG6002	6 or 4	0 or 2	2	0 - 15	0.3	0.5 - 5	3 to 8	1.6	-2.6	Yes	QFN2044 QSOP20

To find out more information:

Datasheet: <http://www.diodes.com/datasheets/ZABG6002.pdf>

Product page: <http://www.diodes.com/products/catalog/detail.php?item-id=5557&popup=datasheet>

DBS page: <http://www.diodes.com/DBS>

Ordering information

Part Number	Packaging	Reel size	Tape width	Quantity
ZABG6002JB16TC	QFN2044	13" 330mm	12mm	3000
ZABG6002Q20TC	QSOP20	13" 330mm	16mm	2500