

# PE53231

Document Category: Product Brief

*Dual-channel Switch LNA Module, 3.45 GHz–4.2 GHz*

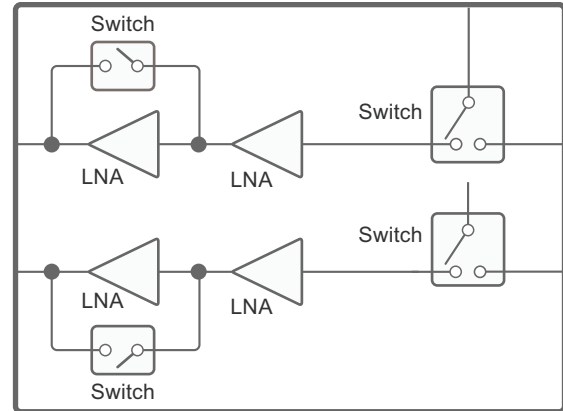
## Features•

- Integrates dual-channel LNA with bypass function and a high-power switch
- 20W average RF input power
- Low noise figure of 0.9 dB
- 37 dB gain at max gain mode
- 32 dBm OIP3
- +105 °C operating temperature
- Packaging – 40-lead 6 × 6 mm LGA

## Applications•

- Wireless infrastructure
- 4G/4.5G TDD-LTE macro/micro cell
- Pre-5G/5G massive MIMO systems
- TDD-based communication systems

Figure 1 ▪ PE53231 Functional Diagram



## Product Description

The PE53231 is a highly integrated front-end module targeted for wireless infrastructure applications such as TDD macro/micro base stations and MIMO applications. It is designed for use at the front end of a receiver chain for TDD-based systems and is ideally suited to 5G solutions or small cell applications.

The dual-channel receiver integrates two independent LNAs with bypass function and a high power switch. The PE53231 can be utilized across the 3.45 GHz–4.2 GHz frequency range with internal impedance matching networks.

This receiver utilizes pSemi's UltraCMOS SOI technology which supports input RF power signal up to 20W average power, assuming 9 dB PAR and a very low noise figure, excellent linearity and very low power consumption. Each channel is controlled individually within the selected frequency band, which allows more flexibility in the system design.

## Revision History

Table 1 ■ Revision History

Document Revision	Date	Change Description
DOC-114091-2	January 2024	Frequency range

## Ordering Information

Table 2 lists the available ordering codes for the PE53231 as well as available shipping methods.

Table 2 ■ Order Codes for PE53231

Order Codes	Description	Packaging	Shipping Method
PE53231A–Z	PE53231 Switch LNA module	Green 40-lead 6 × 6 mm LGA	3000 units/T&R
EK53231–01	PE53231 Evaluation kit	Evaluation kit	1/Box

## Document Categories

### Advance Information

The product is in a formative or design stage. The datasheet contains design target specifications for product development. Specifications and features may change in any manner without notice.

### Preliminary Specification

The datasheet contains preliminary data. Additional data may be added at a later date. pSemi reserves the right to change specifications at any time without notice in order to supply the best possible product.

### Product Specification

The datasheet contains final data. In the event pSemi decides to change the specifications, pSemi will notify customers of the intended changes by issuing a CNF (Customer Notification Form).

### Product Brief

This document contains a shortened version of the datasheet. For the full datasheet, contact [sales@psemi.com](mailto:sales@psemi.com).

### Sales Contact

For additional information, contact Sales at [sales@psemi.com](mailto:sales@psemi.com).

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