WINSOURCE ELECTRONICS

THE DATASHEET OF

PE53231A-Z

PE53231

Document Category: Product Brief

Dual-channel Switch LNA Module, 3.3 GHz–4.2 GHz

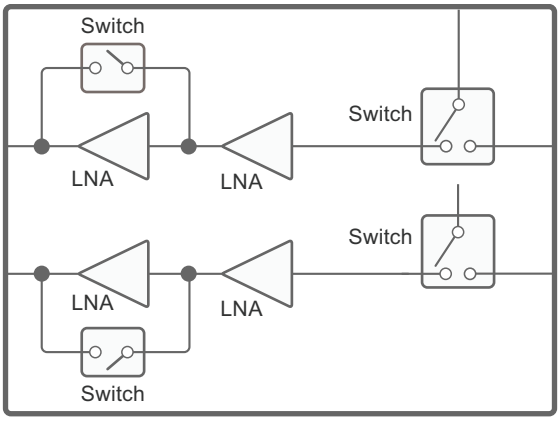
Features

- Integrates dual-channel LNA with bypass function and a high-power switch
- 20W average RF input power
- Low noise figure of 1 dB
- 36 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 3.3 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.

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Revision History

Table 1 ▪ Revision History

Document Revision	Date	Change Description
DOC-114091-2	January 2024	Frequency range
DOC-114091-3	May 2024	Frequency range Features

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 Low-band (3.3–3.8 GHz) evaluation kit	Evaluation kit	1/Box
EK53231–02	PE53231 High-band (3.5–4.2 GHz) evaluation kit	Evaluation kit	1/Box

Document Category

Product Concept

The product presented is in concept stage. It is not an approved product nor is it guaranteed to ever be produced or offered for sale. This document is not intended to be used as a datasheet or basis for a design. All values and diagrams are simulations only and are subject to change at any time.

Sales Contact

For additional information, contact Sales at sales@psemi.com.

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Patent Statement

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