

PE562212

Document Category: Product Brief



2.4 GHz SOI Front-End Module for Thread/Zigbee®/Bluetooth®/ Wi-Fi® IoT Applications

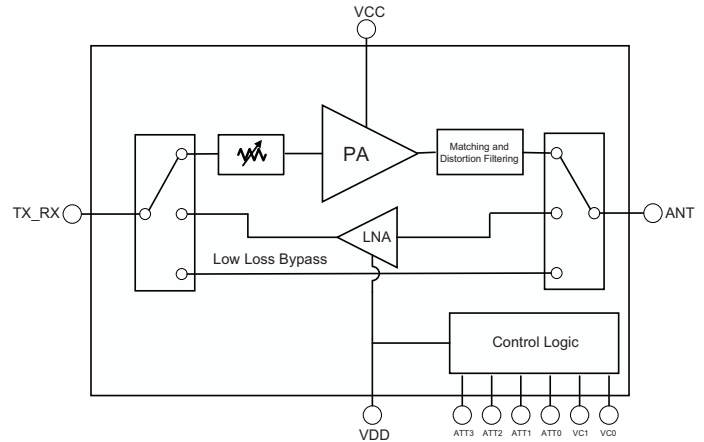
Features

- Integrated PA with up to +21 dBm output power
- Digital gain control with 15 dB range, 1 dB steps
- Integrated LNA (1.6 dB NF, typ.) with low-loss bypass path (0.6 dB, typ.)
- Bluetooth BDR (+21 dBm) and EDR (+15 dBm) operation
- Low-to-medium throughput Wi-Fi (MCS7) capability
- Minimal external components required (bypass cap on VCC and VDD)
- Packaging – Ultra-compact 14-lead 1.8 × 1.8 × 0.63 mm LGA (MSL3)

Applications

- Smart speakers
- Smart lighting
- Smart thermostats
- In-home appliances
- Internet of Things devices
- Range extenders
- Wireless audio
- Wearables
- Sensors

Figure 1 ■ PE562212 Functional Diagram



Product Description

The PE562212 is a high-performance, fully integrated FEM designed for Thread and Zigbee applications as well as Bluetooth (including Bluetooth Low Energy). The PE562212 is also capable of low-to-medium Wi-Fi throughput for devices that require FW upgrades or applications with the need for increased data traffic.

The PE562212 is manufactured on pSemi's UltraCMOS process, a patented advanced form of silicon-on-insulator (SOI) technology.

Revision History

Table 1 ■ Revision History

Document Revision	Date	Change Description
DOC-117159-1	January 2024	Initial release
DOC-117159-2	January 2024	Package dimensions
DOC-117159-3	February 2024	Features Package dimensions
DOC-117159-3	June 2024	Package dimensions

Ordering Information

Table 2 lists the available ordering codes for the PE562212 as well as available shipping methods.

Table 2 ■ Order Codes for PE562212

Order Codes	Description	Packaging	Shipping Method
PE562212A-Z	2.4 GHz IoT FEM	Green 14-lead 1.8 × 1.8 × 0.63 mm LGA	3000 units T/R
EK562212-01	PE562212 Evaluation board	Evaluation board	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.

Sales Contact

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

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