

PE42447

Document Category: Product Brief

UltraCMOS SP4T RF Switch, 10 MHz–8 GHz



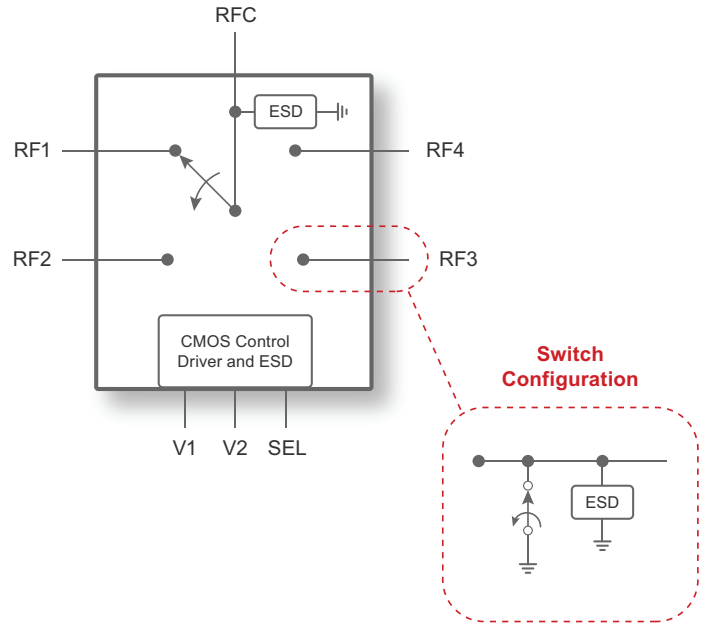
Features

- Low insertion loss:
 - 0.4 dB at 2.6 GHz typical
 - 0.48 dB at 3.8 GHz typical
- High linearity IIP3: 85 dBm
- High power handling: 40 dBm RMS, 50 dBm peak
- +115 °C operating temperature
- Packaging — 20-lead 4 × 4 mm LGA

Applications

- Analog hybrid beamforming RF front end
- 5G massive MIMO active antenna system (AAS)
- 4G/4.5G TD-LTE macro/micro cell/RRH

Figure 1 ■ PE42447 Functional Diagram



Product Description

The PE42447 is a HaRP™ technology-enhanced SP4T RF switch that supports a frequency range from 10 MHz to 8 GHz. It delivers extremely low insertion loss and high linearity with high input power handling capability making this device ideal for hybrid analog beamforming and in 5G massive MIMO (multi-input multi-output) applications. No blocking capacitors are required if DC voltage is not present on the RF ports.

The PE42447 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-119009-1	May 2024	Initial release
DOC-119009-2	June 2024	Frequency range Insertion loss at 3.8 GHz typical

Ordering Information

Table 2 lists the available ordering codes for the PE42447 as well as available shipping methods.

Table 2 ■ Order Codes for PE42447

Order Codes	Description	Packaging	Shipping Method
PE42447A-Z	PE42447 SP4T switch	Green 20-lead 4 × 4 mm LGA	3000 units/T&R
EK42447-01	PE42447 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.

Sales Contact

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

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