

PE42446

Document Category: Product Brief



High Isolation UltraCMOS® SP4T RF Switch, 10 MHz–8.5 GHz

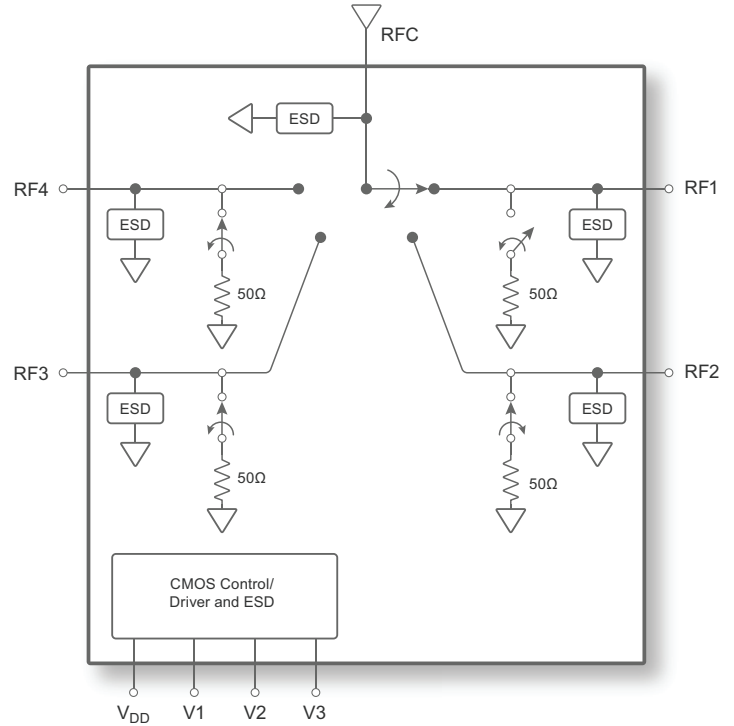
Features

- Operating frequency: Up to 8.5 GHz
- High isolation: 61 dB @ 4 GHz
- Low insertion loss: 0.75 dB @ 4 GHz
- High linearity IIP3: 65 dBm @ 3.8GHz
- Fast switching time: 200 nsec
- -40°C to +125°C operating temperature
- Packaging – 24-lead 4×4 mm LGA

Applications

- DPD feedback loop and VSWR monitoring
- 5G massive MIMO active antenna systems
- Analog/hybrid beamforming RF front ends
- 4G/4.5G TD-LTE macro/micro cell/RRH

Figure 1 ■ PE42446 Functional Diagram



Product Description

The PE42446 is a HaRP™ technology-enhanced SP4T RF switch designed for use in 4G/5G wireless infrastructure and other high performance RF applications. It is comprised of four symmetric RF ports with very high isolation up to 8.5 GHz. The PE42446 is manufactured on pSemi's UltraCMOS® process, a patented variation of silicon-on-insulator (SOI) technology. pSemi's HaRP technology enhancements deliver high isolation, linearity and excellent harmonics performance. It is an innovative feature of the UltraCMOS process, offering the performance of GaAs with the economy and integration of conventional CMOS.

Revision History

Table 1 ■ Revision History

Document Revision	Date	Change Description
DOC-114093-4	November 2023	Changed upper frequency range from 8 GHz to 8.5 GHz.
DOC-114093-4	December 2023	Updated Features section.

Ordering Information

Table 2 lists the available ordering codes for the PE42446 as well as available shipping methods.

Table 2 ■ Order Codes for PE42446

Order Codes	Description	Packaging	Shipping Method
PE42446A-Z	PE42446 SP4T RF switch	Green 24-lead 4×4 mm LGA	3000 units/T&R
EK42446-01	PE42446 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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