

# PE42444

Document Category: Product Brief



UltraCMOS® SP4T RF Switch, 1.8 GHz–5 GHz

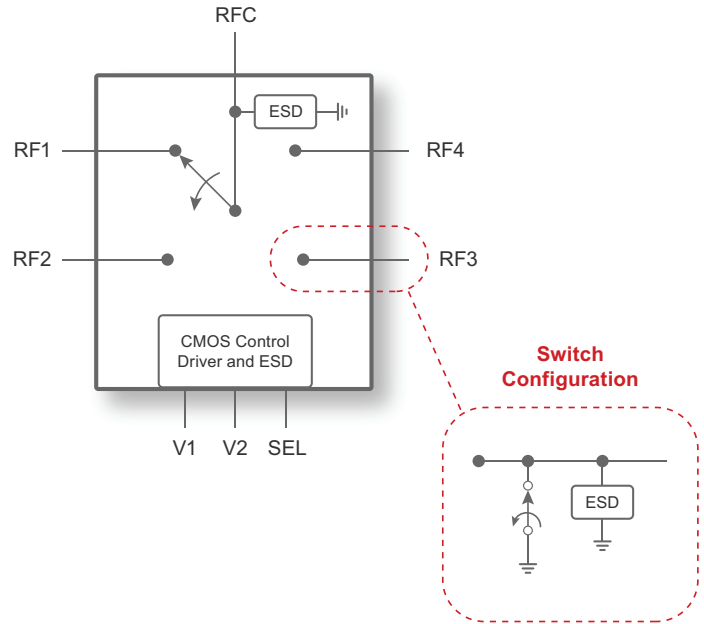
## Features

- Low insertion loss:
  - 0.4 dB at 2.6 GHz typical
  - 0.49 dB at 3.8 GHz typical
- High linearity IIP3: 85 dBm
- High power handling: 40 dBm RMS, 50 dBm peak
- 105°C operating temperature
- Packaging — 20-lead 4 x 4 mm LGA

## Applications

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

Figure 1 ■ PE42444 Functional Diagram



## Product Description

The PE42444 is a HaRP™ technology-enhanced SP4T RF switch that supports a frequency range from 1.8 GHz to 5 GHz. It delivers extremely low insertion loss, high linearity and fast switching time with high input power handling capability making this device ideal for hybrid 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.

pSemi's HaRP™ technology enhancements deliver high 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.

The PE42444 is manufactured on pSemi's UltraCMOS® process, a patented advanced form of silicon-on-insulator (SOI) technology.

## Ordering Information

Table 1 lists the available ordering codes for the PE42444 as well as available shipping methods.

**Table 1 ■ Order Codes for PE42444**

| Order Codes | Description            | Packaging                  | Shipping Method |
|-------------|------------------------|----------------------------|-----------------|
| PE42444A-Z  | PE42444 SP4T switch    | Green 20-lead 4 x 4 mm LGA | 3000 units/T&R  |
| EK42444-01  | PE42444 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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