PE423211

Document Category: Product Brief

### UltraCMOS® SPDT RF Switch, 300 MHz–10.6 GHz

pSemi®
A Murata Company

Features

- AEC-Q100 Grade 2-qualified
- Broadband frequency support: 0.3 to 10.6 GHz
- Suitable for ISM band, Bluetooth®, 802.11 a/b/g/n/ac/ax and ultra-wideband (UWB)
- Low power consumption of 90 nA
- Low insertion loss
  - 0.3 dB @ 6 GHz
  - 0.5 dB @ 8.5 GHz
  - 0.6 dB @ 10.6 GHz
- High Isolation
  - 30 dB @ 6 GHz
  - 15 dB @ 8.5 GHz
  - 15 dB @ 10.6 GHz
- P1dB = +25 dBm
- Operating temperature range: -40 to +105 °C
- ESD performance
  - 2000V HBM
  - 500V CDM
- Packaging – 6-lead 1.6 × 1.6 mm DFN

Applications

- 802.11 a/b/g/n/ac/ax and Bluetooth
- Ultra-wideband (UWB)
- Remote keyless entry
- Telematics
- Infotainment
- In-cabin monitoring system (ICMS)
- General-purpose switching

Figure 1 ▪ PE423211 Functional Diagram
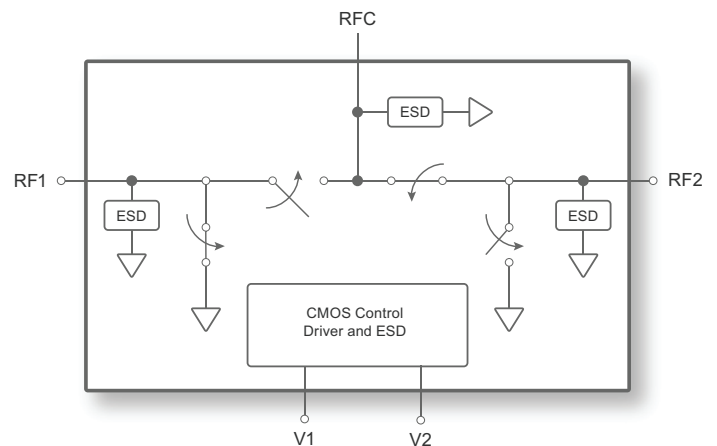
Product Description

The PE423211 is a HaRP™ technology-enhanced reflective 50Ω SPDT RF switch designed for use in high-performance ISM, WLAN 802.11 a/b/g/n/ac/ax, Bluetooth and UWB applications supporting bandwidths up to 10.6 GHz.

This switch features low power consumption, low insertion loss, high port-to-port isolation, fast switching speed, and high-power handling, all in a compact 6-lead 1.6 × 1.6 mm DFN package. The PE423211 device also has robust ESD and temperature performance.

The PE423211 is manufactured on pSemi's UltraCMOS® process, a patented silicon-on-insulator (SOI) technology.

Revision History

Table 1 ▪ *Revision History*

Document Revision	Date	Change Description
DOC-116694-1	November 2023	Initial release

Ordering Information

Table 2 lists the available ordering codes for the PE423211 as well as available shipping methods.

Table 2 ▪ Order Codes for PE423211

Order Codes	Description	Packaging	Shipping Method
PE423211A-Z	PE423211 SPDT RF switch	Green 6-lead 1.6 × 1.6 mm DFN	3000 units/T&R
EK423211-01	PE423211 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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